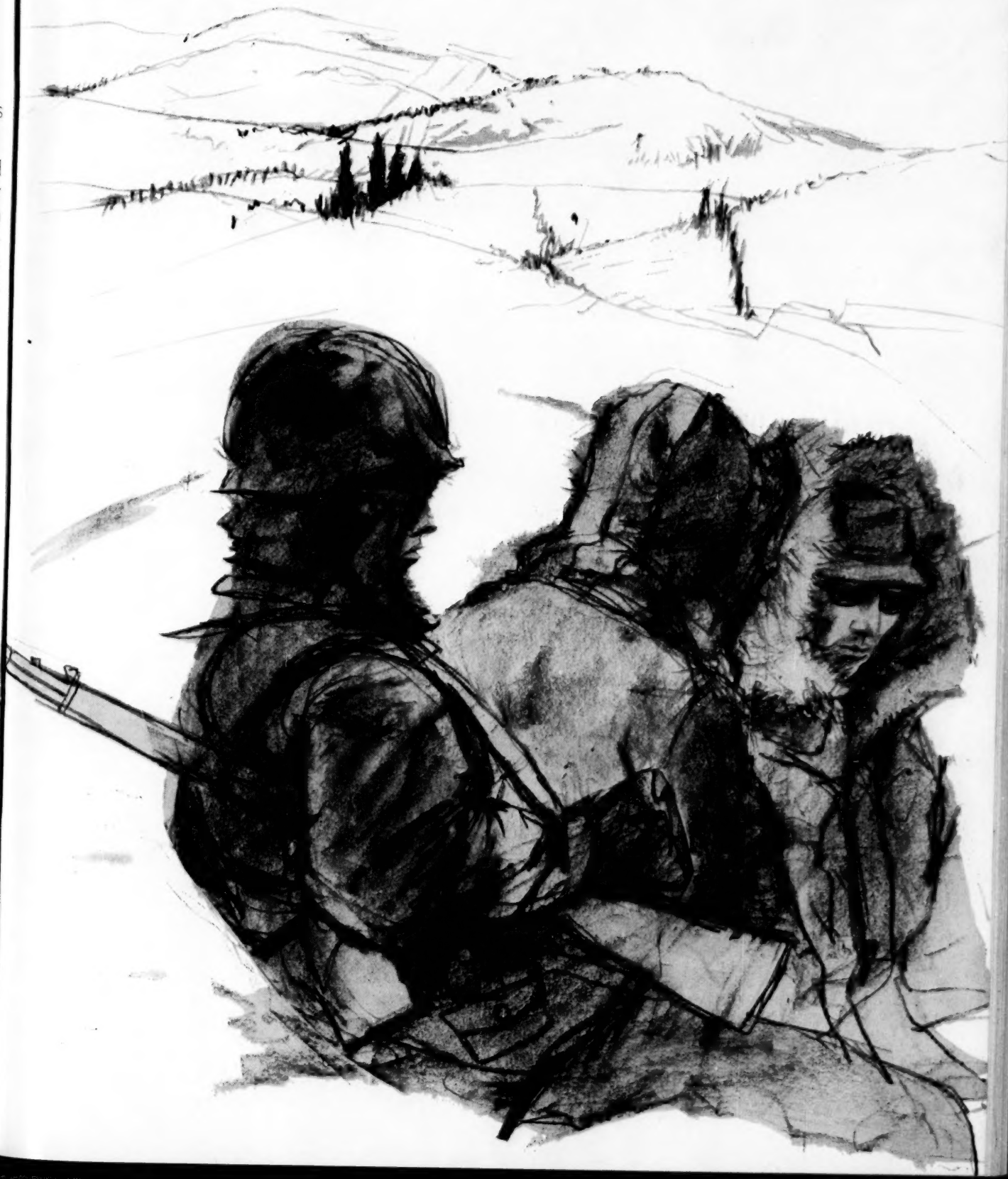
Marine Corps Gazette

DEC 1956

FORTY CENTS



Marine Corps Gazette

DECEMBER 1956
NUMBER 12
VOLUME 40

IN THIS ISSUE

AVIATION SAFETY AND COMBAT READINESS	*Maj J. C. Fox*	8
NIGHT TRAINING FOR MARINES	*LtCol W. H. Simpson*	12
AIR-MOBILE MEDICAL SUPPORT	*Cdr T. H. Wilson, Jr., MC USN*	16
BUILT-IN REPLACEMENTS	*MSgt C. J. Evers*	19
A SUMMARY OF RUSSIAN HELICOPTER ACTIVITIES	*E. K. Liberatore*	20
WHY HITLER INVADED RUSSIA—AND FAILED	*Capt B. H. Liddell Hart*	22
SELL YOUR OWN STOCK	*LtCol J. F. Donahoe, Jr.*	28
SEA POWER IN WORLD HISTORY	*Dr. A. E. Sokol*	32
TRAINING AND TEST REGIMENT		38
CZECHOSLOVAKIA, 1956	*Wing Cdr J. Gellner*	40
NGF IN THE SOLOMONS, III	*Col F. P. Henderson*	46
PAINT 'EM GREEN!	*R. K. Walsh*	52
WHAT HAPPENED TO THE 57?	*Col L. E. Haffner*	56
MESSAGE CENTER	2	
THE OBSERVATION POST	58	
IN BRIEF	45	
PASSING IN REVIEW	60	

THIS MONTH AND NEXT The winter training scene depicted on the cover is a familiar sight to those Marines of the 1st Mar Div who have undergone the annual winter training cycle at Pickel Meadows. The cover was done by staff artist Sgt G. Solin.

Next month the winners of the Marine Corps Association's 1956 Prize Essay Contest will be announced, and the winning article of Group I will be published.

Recently the number of photographs submitted for consideration as cover material has decreased noticeably. All Marines are reminded that the GAZETTE buys personal photographs for cover use; $50 for color, $25 for black and white. Subjects should be of professional interest, the composition of the photo vertical, action moving left to right.

PUBLISHED BY THE MARINE CORPS ASSOCIATION

Membership in the Association is open to all members and honorably discharged former members of the Armed Forces of the US. Dues in the Association are $4.00 per year and members receive the journal of the Association the MARINE CORPS GAZETTE monthly. The MARINE CORPS GAZETTE, copyright 1956 by the Marine Corps Association, Marine Corps Schools, Quantico, Va. is entered as second-class mail, privileges authorized at Quantico, Va., and Baltimore, Md. Editorial, Business offices: Marine Corps Schools, Quantico, Va. Editorial telephone—4780; Business—5750; Bookshop—4749. Subscription rate, $4.00 per year; single copy, 40 cents. Articles, photographs, book reviews and letters of professional interest are invited. If accepted, these are paid for at prevailing space rates. It is requested manuscripts for articles be submitted in triplicate, double spaced, with ample margins. Material may not be reproduced without permission. Picture credits: all pictures official Department of Defense photos unless otherwise credited.

President
Marine Corps Association
Gen R. McC. Pate

Board of Governors
LtGen C. F. Schilt
LtGen M. B. Twining
Col R. E. Hommel
Col J. L. Mueller

Secretary-Treasurer
Marine Corps Association
and
Editor in Chief
Marine Corps Gazette
BrigGen R. D. Salmon

Editorial Board
Col S. R. Shaw
Col R. L. Kline
Col J. D. Hittle
LtCol J. R. Blackwell
LtCol E. H. Railsback
LtCol J. C. Short
Maj P. G. Graham

Editor and Publisher
LtCol J. A. Crown

Managing Editor
Capt H. W. Henzel

Business Manager
Capt R. A. Haydock

Promotion Manager
CWO F. T. Stolley

Advertising Representative
Shannon & Associates, Inc.
New York—28 West 44th Street.
Chicago, Atlanta, Cleveland, Detroit, St. Louis, Kansas City, Mo., Los Angeles and San Francisco

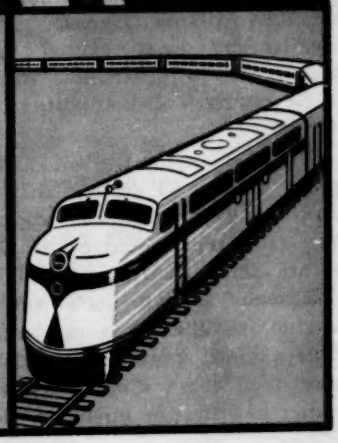
Opinions expressed in the Gazette do not necessarily reflect the attitude of the Navy Department nor of Headquarters, United States Marine Corps

The Best Buy--
BUY TRAIN!

Home for Christmas *for sure!*

The
RAILROADS
of the
United States

SPECIAL FURLOUGH FARES
...money-saving tax-free fares for service personnel!



message center

Sea-Going Blues

. . . After reading the comments of Capt J. R. Bradley in the Sept *Observation Post* I wholeheartedly endorse his suggestion.

My opinions are based upon a tour of duty as CO Mar Det USS *Baltimore*, the ship that won the "Outstanding Cruiser of the Pacific" award in 1955. The *Baltimore* Marines at that time (she's in mothballs now) were a sharp and eager outfit, and reconnaissance training would have been a welcome respite from the daily routine of guard duty, ceremonies, secondary battery drill and regular training schedule. Time and again we tried to get the ship captain's permission to send us on the beach to maneuver, to engage in rubber boat practice, or to make an amphibious landing. For some reason the answer was always "no."

By custom and ship's T/O, the CO Marine Detachment, is usually designated to command the ship's landing party, which is based on a full-sized rifle company. The Marines form one rifle platoon, while the other two rifle platoons, the machine gun platoon and mortar section are composed of various and sundry sailors—anything from a yeoman apprentice to a 3/c steward's mate. At least the sailors' names are on the landing party roster. However, to actually break out the entire landing party for a muster *much less* for drill, was an entirely different matter. The ship's business always seemed to prevent a landing party muster, no matter how often the CO Marine Detachment would try to get permission for same. During my entire tour of sea duty, despite countless attempts, my landing party existed only on paper. I was never able to hold a single muster. Such conditions should not be.

While we're on the subject of sea-going Marines, I suggest that we return to the old practice of sending only our tall, representative-type Marines aboard ship. Battleships and cruisers visit many foreign ports, and a tall Marine in dress blues ordinarily presents a much more impressive appearance than some short individual, no matter how neat he might be. If at all possible, a minimum height of 5 feet 10 inches should be established.

Congratulations to Capt Bradley. Instead of merely sitting around and bemoaning the fate of sea-going Marines this officer has come up with an excellent solution to existing conditions.

MAJ N. W. HICKS

1st Mar Div, FMF

As the Caissons Go Rolling Along

. . . I have read with avid interest various proposals for inducing enlistments and re-enlistments. These proposals, while all good, nonetheless seem to be leaving out a vital component — that of enhancing the prestige of the Marine Recruiter in the field by supplying him with a vehicle that he doesn't have to be ashamed of driving due to its antiquity and which is equal to vehicles supplied to recruiters of other Services.

I have been questioned many times as to why the Marine Corps does not have cars and sedans like the other branches of Service. In answer all I can do is mumble something about our best vehicles going to the combat troops or that I travel over so many back roads that a sedan is not feasible and under such conditions a truck is more practical.

On the other hand it is my sincere belief that a savings could be afforded by replacement of these hoary relics that we recruiters are blessed with. At least once each month some other part expires which means that (in my Sub-Station at least) I am without a vehicle until repairs can be afforded. When on the road I never know for sure whether my aged and venerable truck will make it back.

We are trying to do a very difficult job in the best possible manner, but we need a little help. It's time that vehicle-wise we be put on an equal footing with other branches of service.

TSGT D. I. MICHALOVICH

Ada, Okla.

Staff NCO Physicals

. . . In connection with MCO 6100.3, which notes a tendency toward a gradual decrease in physical fitness standards of career officers and noncommissioned officers, it is suggested that Staff NCOs be required to undergo an annual medical examination, as do officers.

At present, the average NCO sees a doctor's stethoscope once every 4 to 6 years. The medical profession continually points up the wisdom of a regular annual checkup. Yet older NCOs, chary of the long sick call lines, visit the base or station sick bay only upon re-enlistment, or when nudged by acute physical discomfort.

It would definitely be of value to the Corps, and to the individual, if a procedure similar to the one suggested be made a policy.

MSGT F. J. O'NEIL

Santa Ana, Calif.

Firepower

. . . A Marine rifle platoon reinforced with a section of LMGs delivers 2,260, .30 caliber rounds on a given target in one minute. This firepower is made up of 18 M1s firing at a maximum effective rate of 20-30 rpm, 9 BARs at 120-150 rmp and 2 LMGs firing at 75-150 rpm.

Suppose now, that this platoon were stripped of these 3 weapons and they were replaced by one of the new automatic rifles currently being tested by the Marine Corps. The Marine rifle platoon could then deliver 4,725 rounds on a given target in one minute, or double the present figure.

This firepower would come from 27 effective automatic rifles in the platoon firing at a maximum effective rate of 150-175 rpm.

I would like now to refer to the article *A Comparison: Marine and Russian Weapons* in the Oct GAZETTE.

"The new Russian rifles weigh less than the M1 rifle and yet retain a greater quantity of ammunition. This is particularly true when comparing the 'Avtomat' rifle with the M1. The 'Avtomat' is much shorter than the M1 rifle, weighs slightly less and yet it retains 22 more rounds of ammunition. It has a cyclic rate of fire between 550-600 rounds per minute."

This cyclic rate of fire compares with the fast cyclic rate of the BAR. So we may assume that its maximum effective rate of fire is comparable with that of the BAR. This would be 120-150 rounds per minute.

A Russian rifle platoon comparable to a Marine rifle platoon in effective riflemen could throw out 4,050 rounds per minute as opposed to the Marine's capability of 2,260 rounds per minute.

Furthermore, again quoting from Capt Haslam's article that, "The BAR is compared to the DP and the DPM since the later mentioned guns are employed in the Soviet Rifle Squad.

Here's One Of Santa's Prize Packages

Telephones as Christmas Gifts

If you order early, we'll do our best to install your gift telephones before Christmas. If that isn't possible, then we'll come around after Christmas and install them wherever you wish.

There's a new idea in gifts and it's one of the best in a long, long time. It's the idea of giving telephones for Christmas.

Few things are so sure to be appreciated by everybody. For when you give someone an additional telephone you give three of the greatest gifts of all—comfort, convenience and security. And "it's fun to phone."

So this year, make it something different and "give the gift you'd like to get."

Save steps and work for Mother by giving her an additional telephone for the kitchen or bedroom.

Help Dad avoid puffing up the stairs (they may be getting a little steeper, you know) by giving him a telephone in his workshop.

Reward the teen-agers who are growing up so fast with a telephone for their very own. (That could be a break for you, too!)

Easy to do. The cost is moderate. There's a choice of eight handsome colors. Ivory, beige, green, blue, red, yellow, brown and gray. Just call the Business Office of your local Bell telephone company.

Working together to bring people together
BELL TELEPHONE SYSTEM

The DP and DPM are lighter than the BAR, have a higher cyclic rate of fire, weigh less and carry 27 additional rounds over and above that of the BAR. In addition, the DP and DPM have provision for quick removal of the barrel when it becomes overheated."

The existence of such weapons organic to the Soviet rifle squad considerably increases the already potent firepower of the Soviet rifle platoon mentioned above.

In summary then, I believe that all the preceding figures demand that something be done immediately to equip the Marine rifle platoon with automatic rifles equal in firepower to the Belgium FN and American T44.

2d Lt J. S. Cornell

Quantico, Va.

. . . May I submit my plea for more informative articles like *A Comparison: Marine and Russian Weapons*? I, for one, would enjoy seeing more of the same. I don't believe any reader would deny the need for more material of this kind appearing in the Gazette. Articles on other Russian equipment can most certainly follow.

SSgt J. S. Eckerle

Louisville, Ky.

The Shined *Boot*

. . . Is the shined boot actually dead as stated by Capt Steele in his letter in the September Gazette? Para 49070.1, MCM states all brown shoes will be shined with dark brown polish and para 49070.1.a states boots and field shoes may be dyed dark brown. By dyeing the boots they become brown shoes and should be shined. To further point out confusion in this matter our company commander informed us at drill one morning that boots would not be shined and quoted change 14; the next morning he passed the word that battalion had re-read the paragraph and that they are to be dyed dark brown and therefore shined in accordance with 49070.1. "To shine or not to shine" is the question.

TSgt R. J. Southall

Washington, DC

Ed: *Marine Corps Uniform Board says that dyeing a boot does not make it a shoe. To clarify the matter, a Board representative says Para 49070.1, MCM is being changed to read "All brown dress shoes . . . will be shined. . . ."*

CORRECTION

The October issue of the Gazette carried an article, *Musings on the A Bomb*, by Capt C. H. Amme, Jr., USN. In the last paragraph of column one, page 25, a statement was incorrectly attributed to Mr. Bernard Brodie. This statement should have been credited to Col R. C. Richardson, III in the *Air University Quarterly Review*. The Gazette regrets the error and the inconvenience caused the author.

Logistic Lifts

. . . Gen Bowser's article, *War by Battalions* in the October issue caused me to pause and give some thought to his fourth consideration for the employment of the infantry battalion under the unit separation concept. While I certainly do not qualify as an expert, the problem is a real one to me as the S4 of an infantry regiment.

The first part of the solution to Gen Bowser's fourth consideration is undoubtedly Unit Distribution using a helicopter of greater capacity than the HRS, perhaps the HR2S (?).

To implement the system of Unit Distribution and eliminate the Beach Support Areas which are an anchor around the neck of an assault unit as well as a profitable target, I propose the following: Modify existing shipping of the CVE and CVL type carriers to make them into a cargo carrying ship for the helicopter ship to shore concept. A designation ACHA (Assault Cargo Helicopter) would seem appropriate. The ship need not carry aircraft at all and would merely be an AKA with a large helicopter platform and elevator. The hangar decks could well be loaded with assault cargo of all classes, including vehicles of the type that could be helilifted.

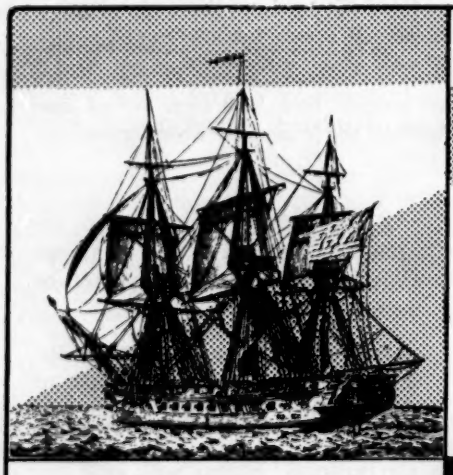
The utilization of this type shipping would enable the assault battalions to be resupplied even though adequate beach areas may not be uncovered or rendered unusable through enemy actions or hydrographic considerations. The release from dependence on over the beach landing of their supplies would increase the choice of the commander as to when and where he will land.

Requests for supplies could be handled and coordinated by a unit TACLOG operating in the vicinity of the Helicopter Direction Center aboard another carrier.

As Gen Bowser has stated it would be presumptuous to attempt a detailed solution of these problems without adequate experimentation and evaluation; however it is my earnest hope that the foregoing may provoke some discussion and thought. . .

Maj R. J. McGlynn

1st Mar Div



Since 1879

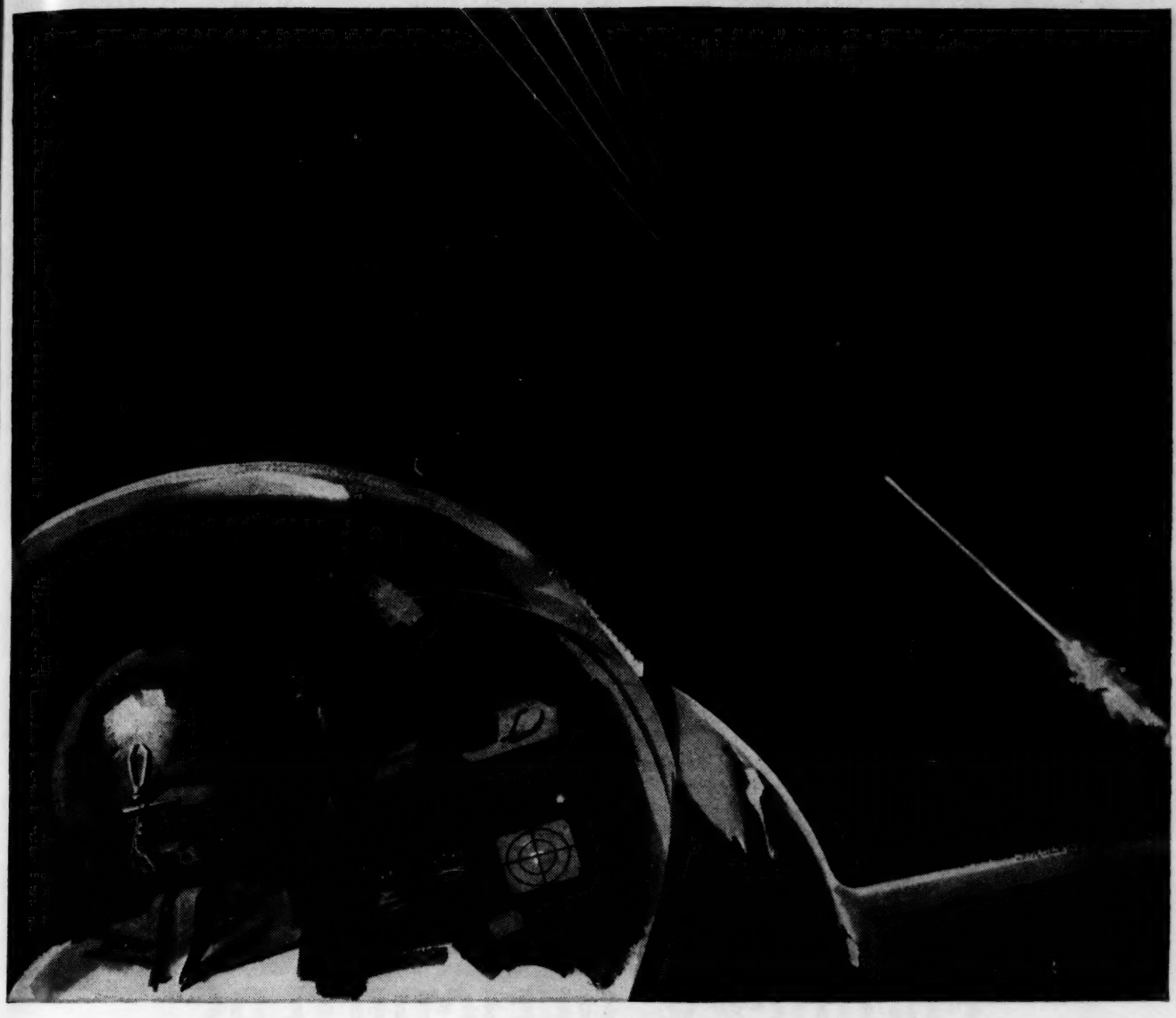
Then . . . . . and now Navy Mutual Aid Association carries forward their services on behalf of officer personnel and their families. For 77 years NMA has always been ready to render immediate, effective assistance to you and your dependents.

BENEFITS IN FORCE ..... over $100,000,000
ASSETS ..... more than $ 30,000,000

For further information fill in coupon

Name .....
Address .....
.....

Navy Mutual Aid Association
Navy Department Washington 25, D. C.



SCRATCH ONE BOGIE!

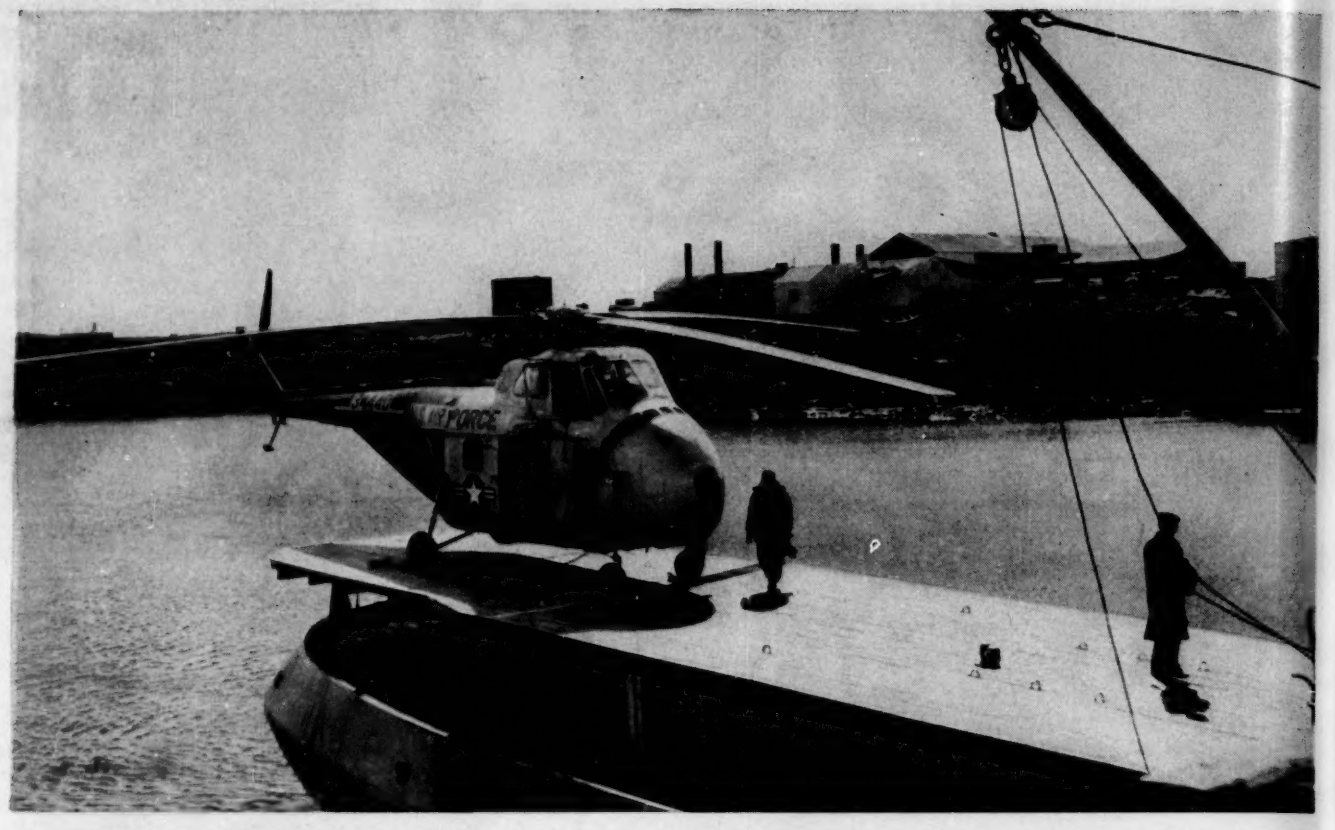
Between the words *scramble* and *missile on target,* only minutes have elapsed! But it takes more than the pilot alone to accomplish this task. The team consists of many highly trained technicians — the radar men, the mechanics, the armorers, and dozens of others — each doing his assigned task with proficiency. When experts like these are moved to new assignments, it's important that they travel the fastest way. That's why the military selects the dependable Scheduled Airlines to put men on the job *five times faster.* Scheduled flight is often the cheapest way, too, when savings in pay and per diem dollars are considered. Call your Scheduled Airlines representative and let him show you how to keep your men ON THE JOB . . . not "on the way."

10% DISCOUNT for official travel on TR's

THE CERTIFICATED **Scheduled Airlines** OF THE U. S. A.

ALASKA AIRLINES
ALLEGHENY AIRLINES
AMERICAN AIRLINES
BONANZA AIR LINES
BRANIFF AIRWAYS
CAPITAL AIRLINES
CENTRAL AIRLINES
COLONIAL AIRLINES
CONTINENTAL AIR LINES
DELTA AIR LINES
EASTERN AIR LINES
FRONTIER AIRLINES
LAKE CENTRAL AIRLINES
LOS ANGELES AIRWAYS
MACKEY AIRLINES
MOHAWK AIRLINES
NATIONAL AIRLINES
NEW YORK AIRWAYS
NORTH CENTRAL AIRLINES
NORTHEAST AIRLINES
NORTHWEST ORIENT AIRLINES
OZARK AIR LINES
PACIFIC NORTHERN AIRLINES
PIEDMONT AIRLINES
RESORT AIRLINES
SOUTHERN AIRWAYS
SOUTHWEST AIRWAYS
TRANS-TEXAS AIRWAYS
TRANS WORLD AIRLINES
UNITED AIR LINES
WEST COAST AIRLINES
WESTERN AIR LINES
WIEN ALASKA AIRLINES

DEPENDABLE, SCHEDULED SERVICE SAVES MILLIONS OF VALUABLE MAN HOURS FOR THE MILITARY



HARD WORK IN ICELAND—Supporting an aerial survey team in Iceland, this Sikorsky H-19 of the U.S. Air Force carried personnel and supplies between ship and shore bases. In 23 flying hours, the helicopter carried 41 people and 47,000 pounds of cargo. This is a good example of how rugged Sikorsky helicopters can operate from very small areas, with minimum support facilities, and under a variety of weather conditions.

AROUND THE WORLD WITH SIKORSKY HELICOPTERS

FIRST S-58 TO BELGIUM—The first units of a fleet of 12-passenger Sikorsky S-58Cs have been delivered to Sabena Belgian World Airlines. Sabena will operate the fleet on its European routes. Larger and more powerful than the S55s Sabena now flies, the S-58C, named the *Continental*, cruises at 105 miles per hour.

1000th S-55—B. L. Whelan, general manager, and Igor Sikorsky, engineering manager, mark a milestone in production of transport helicopters with completion of this 1000th Sikorsky S-55, a Marine Corps HRS. Two newer and larger helicopters are also in production, the S-58 and the twin-engined S-56.

AIRLIFT DEMONSTRATION—To show evacuation techniques in the removal and transport of light aircraft, an Army Sikorsky H-34 helicopter carries a Cessna L-19. The demonstration and the suspension arrangement were worked out at Fort Sill, Oklahoma, site of the Army's H-34 transition school. The Sikorsky H-34, the Army's newest helicopter in operational use, can carry cargo loads of up to two tons or 17 combat-ready soldiers plus crew of two.

HELICOPTER HISTORY

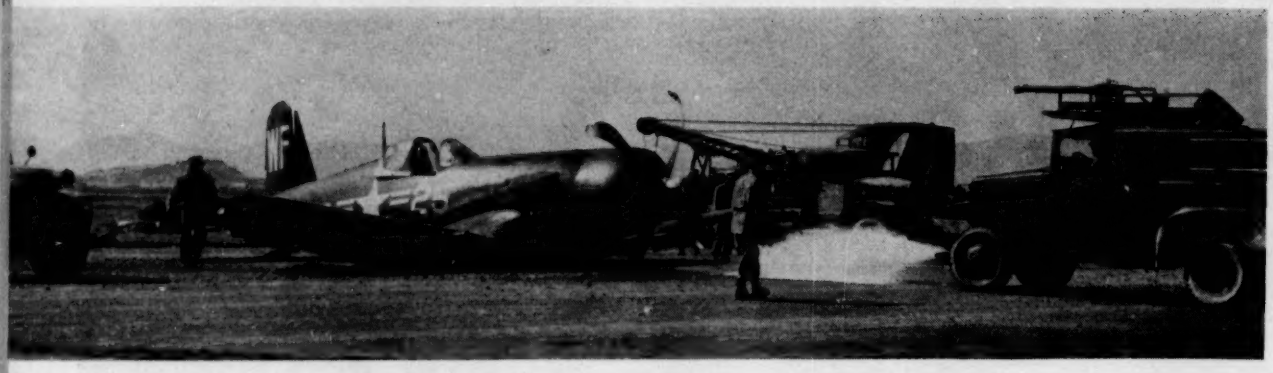
H-34 SPEED RECORDS

In July, 1956, an Army Sikorsky H-34, flown by Capt. Claude Hargett, right, and Capt. Ellis Hill, of Fort Rucker, Ala., established new closed-circuit speed records. The records were for 100 km, 141.9 mph; for 500 km, 136 mph; and for 1000 km, 132.6 mph. The previous 1000 km closed-circuit world speed record for rotorplanes, 66.6 mph., was set by a Sikorsky R-5A in 1946.

SIKORSKY AIRCRAFT

BRIDGEPORT, CONNECTICUT

One of the Divisions of United Aircraft Corporation



AVIATION SAFETY AND COMBAT READINESS

Maj J. C. Fox

A BASIC PRINCIPLE OF MARINE Corps combat operations is the air-ground team concept. Under this concept the combat readiness of Marine Aviation is of vital importance to all Marine forces. Combat readiness in Marine Aviation is, to a large extent, affected by aviation safety. What is aviation safety? Simply, it is the science of conducting aviation operations in a manner which will conserve manpower and aircraft for the possible future requirements of actual combat operations.

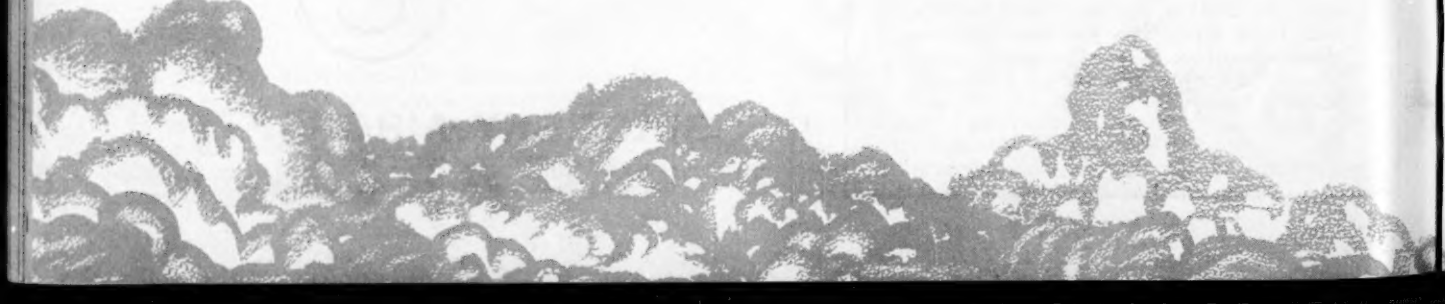
Aviation safety in the Marine Corps is part of an integrated Naval Aviation Safety Program operating throughout the Department of the Navy. During the past 3 years this program has been completely revised. This article is concerned with why the program was revised, how it was revised, and the effects on the combat readiness of the Navy and Marine Corps.

Calendar year 1955 recorded the safest year in the peacetime history of Naval Aviation. During the past 2 years the major damage accident rate was reduced by a whopping 35 percent, or 2 accidents in each 10,000 hours of flying. Since several million flight hours are recorded annually in Naval Aviation, the number of aircraft accidents was reduced by hundreds.

What was the significance of this reduction in the aircraft accident rate and particularly, what did it mean to us as Marines? For one thing, it meant that a loss of millions of tax dollars was avoided through a reduction in the number of aircraft destroyed or requiring major repair. Since about one of every 6 major accidents results in a fatality, it also meant that literally scores of lives were saved because of the improvement. Lastly, and of extreme importance from a military point of view, it meant a great increase in the combat readiness of all Naval forces including the Marine Corps. Aircraft destroyed in accidents, or undergoing repair of crash damage, are not available to support either air, ground or surface operations in obtaining the combat objectives.

What caused this reduction in the aircraft accident rate? It was a result of a deliberately planned and executed aviation safety program.

An aviation safety program had been in existence for many years. During the period following World War II this program operated satisfactorily in a Naval Aviation composed mostly of seasoned pilots and aircraft. However, coincident with the action in Korea and the rapid introduction of large numbers of newly designated pilots and new aircraft into the operational aviation units, the aircraft accident rate



stopped its downward trend and started to rise. By July of 1952 the rate stood at 5.5 accidents occurring in each 10,000 hours flown by the Navy and Marine Corps.

In 1952 the Naval Aviation Safety Activity was established at the Naval Air Station, Norfolk, Virginia as an initial effort towards reducing the aircraft accident rate. With a small complement of officers, enlisted and civilian personnel, this Activity's general functions were to process all Naval aircraft accident reports; publish statistical summaries of aircraft accidents to the Naval Service; and to publish a weekly summary of aircraft accidents containing notes and comments concerning the accidents. The establishment of this Activity had some of the desired effect in stabilizing the accident rate. However, the experience of this group soon made it apparent that much greater effort would be required if a significant reduction was to be achieved.

After a careful study of the situation at the departmental level, a deliberate decision was reached to make an all-out effort to drive the aircraft accident rate down to a point below any previously recorded in Naval Aviation. With the active support of the Office of the SecNav, a "new" Naval Aviation Safety Program was planned and executed under the direction of the CNO and the immediate control of the Deputy CNO (Air). Headquarters Marine Corps participated in, and strongly supported, the establishment of this new Naval Aviation Safety Program. Marine Corps representation was provided as an integral part of the program at all levels of organization.

One of the first steps in the implementation of the new Naval Aviation Safety Program was the establishment of an Aviation Safety Division within the organization of the Deputy CNO (Air). This division was assigned the following brief, but far-reaching mission:

"To plan and direct a program for the development of aviation safety and the dissemination of directives and information based thereon; to sponsor and direct the aviation safety programs and related inspection procedures of all commands with the objective of preventing aircraft accidents and increasing the combat readiness of naval and Marine aviation."

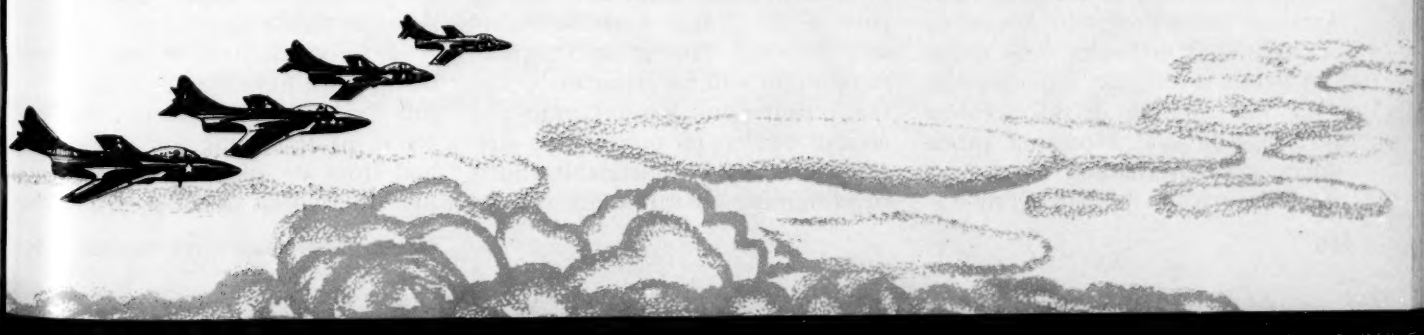
To carry out this mission, the Aviation Safety Division was organized with a Director and a small staff which included one Marine Corps officer billet.

At about the same time, the Naval Aviation Safety Activity began the first of two expansions of personnel, equipment and funds. This Activity was later redesignated as the Naval Aviation Safety Center. Included in these expansions were the establishment of 7 Marine Corps officer and enlisted billets within the organization of the Center. With the strengthening of the Aviation Safety Center came a new and expanded mission:

"To collect, evaluate, and disseminate information pertaining to aviation safety; to review or prepare for the Chief of Naval Operations directives, issuances and other correspondence for advancement of aviation safety; to prepare and promulgate aviation safety literature; to conduct periodic aviation safety surveys; to conduct special investigations of aircraft accidents, and to advise the Chief of Naval Operations on all phases of the aviation safety effort in order to maintain the highest practicable level of aviation safety."

The myriad activities of the Aviation Safety Center are too extensive to be detailed here. Broadly, however, it has acted as a monitor for the Aviation Safety Program, conducted major research in aviation safety, and acted as a clearing house for aviation safety information throughout Naval Aviation. In many respects this field activity of the CNO has been a catalyst for the entire Naval Aviation Safety Program.

To provide overall review of the program and to ensure co-ordination among the many agencies concerned with aviation safety, the CNO Aviation Safety Council was given a new Charter in March 1954. This Charter provided that the mission of the Council is to serve in an advisory capacity on all matters relative to aviation safety and aircraft accident prevention. This council, under the chairmanship of the Asst CNO (Air), included in its membership ranking representatives from the Office of the CNO, the BuAer, the BuMed, the Naval Aviation Safety Center, and last, but not least, the Marine Corps' Division of Aviation.



The belief that all Marines should know what is occurring in the Naval Aviation Safety Program, and the vital role it plays in the over-all combat readiness of the Marine air-ground team prompted **Maj J. C. Fox** to write this article. Commissioned via the Aviation Cadet program in 1943, he served as a fighter pilot with VMF-111 during WWII. During the Korean conflict he was with VMF-311 and as a pilot completed 100 missions; later he was squadron S4. Prior to being assigned to Junior School he was with the Aviation Safety Division, CNO, as head of the Aircraft Accident Investigation Branch.

The establishment of these central agencies did not, and could not, of itself reduce the aircraft accident rate. It was only in the operational commands and units, where the aircraft were being flown, that actual reduction in aircraft accidents could occur. Therefore, a last step was necessary to establish the basic organization for aviation safety. In March 1954, OPNAV Instruction 3710.16 concerning Policies and Standards Relative to Aviation Safety was issued. The following significant sentences are quoted in part: "The primary function of Naval Aviation is the maintenance of a high degree of readiness for prompt and sustained combat operations. For this reason the Aviation Safety Program of the Navy and Marine Corps must be planned and conducted in a manner which will contribute to the maintenance of a high state of combat readiness. . . . " In another passage this Instruction reaffirmed that: *"Aviation Safety is a Command Function.* . . . In this regard the close personal attention and supervisory efforts of all commanders, from the Squadron to the Type level, must be considered primary."

Thus, the maintenance of combat readiness and responsibility for aviation safety were officially established as a function of command. This was basic to the success of the program. Having control of operations, commanders provided and enforced the measures which ensured that these operations were conducted both efficiently and safely.

These measures completed the basic organization of the new Naval Aviation Safety Program. A number of additional measures were necessary before it was fully implemented.

1) The existing aircraft accident investigation and reporting procedures were overhauled to provide the information needed by responsible authorities for accident prevention. Revised Instructions were promulgated in April 1954 and again in May 1956 which were known as *Navy Aircraft Accident, Incident, and Forced Landing Reporting Procedure* (Currently OPNAV Instruction 3750.6B). These Instructions govern the reporting of all accidental occurrences to aircraft in the Navy and Marine Corps.

2) The Naval Aviation Safety Officer Course was established in 1954 at the University of Southern California to provide trained Aviation Safety Officers for Navy and Marine operational aviation activities. This 8 weeks course provides 280 classroom hours of instruction in basic aeronautical engineering, accident investigation and prevention, aviation psychology, aviation physiology and educational methods. Approximately 185 officers, including about 40 Marines, have completed this course and been assigned to operational aviation activities.

3) During 1954 and 1955 primary duty billets of Aviation Safety Officer were established in each aircraft squadron and on the staffs of most major air commands. In the Marine Corps this took the form of CMC letter AAZ-1971-mav of 4 April 1955, which set forth the Commandant's views on aviation safety and established billets for Aviation Safety Officers throughout Marine Aviation.

4) The CNO Aviation Safety Awards were established in November 1954. OPNAV Instruction 1650.2 established the following policy in connection with these awards: "As part of the Naval Aviation Safety and Accident Prevention Program, recognition will be given to operating, training and Reserve units and aircraft carriers for outstanding safety records and commendable efforts in preventing aircraft accidents. Because of the importance of accident prevention to economy, morale and the combat readiness of Naval Aviation, together with the significance of pride of achievement in mission accomplishment, such performance will be marked with a permanent and worthwhile award." These awards have been highly successful in creating intensive interest and competition in reducing aircraft accident rates and promoting the combat readiness of aviation units. It is noteworthy that in the first year of operation, Marine Corps squadrons won 4 of the 11 awards for which they were eligible. The Marine Corps winners for fiscal year 1955 were VMJ-2, VMF-123, HMR-263 and HMR-363.

5) To assist aircraft accident boards in the determination of material failure or unsatisfactory equipment as cause factors in aircraft accidents, the BuAer established an improved Disassembly and Inspection Report (DIR) System. Under this system any Navy or Marine aircraft accident board can obtain the assistance of one of the several Overhaul and Repair Departments, or the contractor who manufactured the equipment, for a complete priority disassembly and inspection of the suspect equipment.

6) The BuAer established the Failure or Unsatisfactory Report (FUR) System for the expeditious reporting and processing of information on the material failures or unsatisfactory performance of all aircraft parts or related equipment. This system employs modern machine methods and microfilm cards to process the more than a thousand FUR reports received daily from Navy and Marine aviation units. By these methods the early detection of material deficiencies is possible.

This system also incorporates a message report form which is required on all material failures which affect safety of flight. These Safety of Flight Failure reports receive priority action in the Bureau of Aeronautics and review by the Naval Aviation Safety Center.

7) In aviation, it is the human beings who have the most opportunity for "causing" accidents through errors of technique and judgment and from an infinite variety of human limitations in the environment

of the atmosphere. Into this important and complex area the Naval Flight Surgeons were called to assist. Current instructions require that a Flight Surgeon be a member of each aircraft accident board, where his specialized talents and training are available in determining the sociological, psychological and physiological factors which may have contributed to the accident.

8) A major factor in the acceptance and success of the Aviation Safety program has been the continuous flow of safety information. This has been provided throughout Naval Aviation by several high quality publications. In the *Naval Aviation News,* published by the CNO and the BuAer, the famous "Grampaw Pettibone" (a mythical character known as the oldest and wisest Naval Aviator), holds forth monthly with his pungent remarks on aircraft accidents and aviation safety in general. The Naval Aviation Safety Center publishes weekly and monthly reviews. In addition, a large group of statistical summaries, digests, accident studies provide the detailed information required.

Because of space limitations the above listing does not include a number of projects and developments which were of great importance to aviation safety. Among these were: 1) The manifold activities of Aviation Safety Councils who co-ordinated and supported aviation safety within major geographical areas or commands; 2) The individual aviation safety program conducted by each aviation command, fitted to the assigned mission and operational requirements of the command; 3) The many advances made in aircraft and equipment; and 4) The obviously great contributions of the officers and men who fly, maintain and support the aircraft.

What has this program accomplished? The Naval Aviation Safety Program has come a long way in the past 2 years. Through the determined efforts of everyone concerned, the aircraft accident rate has been greatly reduced by 2 accidents in each 10,000 hours flown, as previously noted. There was a consequent saving of large numbers of lives and aircraft. The combat readiness of Navy and Marine aviation was significantly advanced.

It should be reiterated here that with Marine air-ground operations becoming more closely integrated than ever before, every Marine has a stake in reduced aircraft accidents. Particularly in connection with the 3-dimensional amphibious attack, the conduct of efficient and safe air operations becomes one of the keys to success and mission accomplishment. The effects on the success of this complex combat operation when personnel or vital supplies are lost through aircraft accidents should be obvious. Losses from non-combat causes have no place in a combat operation.

In the case of the Aviation Safety Program, as with any military program, the question of cost versus results must be considered. How has it fared? Considerable funds have been expended and a large number of personnel have been assigned to the program. On the record to date it appears clear that these have been repaid many, many times over through the reduced loss of lives and savings in the millions of dollars from reduced aircraft losses. The greatly increased combat readiness of Navy and Marine aviation has been a by-product of incalculable value.

However, avoidable aircraft accidents still occur daily. To further reduce the accidents will require increased effort in the future. It is an unfortunate fact that each successive reduction in the aircraft accident rate becomes harder to achieve. Nevertheless, the future should bring further reductions in the aircraft accident rate. That is the goal. Aviation *can* and *must* be made safer through continued effort and a professional approach to the task.

The success of the Naval Aviation Safety Program will be recorded by a progressively decreasing aircraft accident rate. The payoff will be in the progressively increasing combat readiness of the Navy and Marine Corps. USMC

★ ★ ★ ★

Ah So!

HAVING BEEN CAPTURED when Corregidor fell, upon release, I buttonholed everyone I saw wearing the Philippine Liberation ribbon. One of the aviators I questioned told me that on the morning of the Leyte landing, radio silence was broken with this transmission.

"Man, am I confused? Planes going north, planes going south, planes going east and west. Planes at 10,000, planes at 15,000, planes at all altitudes going in all directions. Does anyone know what's going on? I'm really mixed up."

An authoritative voice came on the air and snapped, "Who made that last transmission? Over." After a few moments of silence, the authoritative voice demanded, "Who made that last transmission? This is the Commanding General. Over."

In a singsong, the voice that had broken radio silence said, "I'm not THAT confused."

Col W. F. Prickett

Shhhh!

DURING THE EARLIER STAGES of the war in the Pacific one lone battalion of Marine parachute troops staged a week long raid on the Japanese stronghold of Choiseul Island in the Northern Solomons.

In the heat of battle, with bullets singing all around, a Marine kept shouting one uncomplimentary epithet after another at the Japanese. Most had to do with the Emperor's diet and his ancestry; the entire enemy force was included and, in particular, that section of it immediately in front of the Marine position. The firing became more vicious and the bullets seemed to come even closer. Marines were literally hugging the earth. His buddy, in a worried voice, called over from the next foxhole, "For God's sake, keep quiet! Those *!?//# are mad enough already!"

Maj R. E. Baker

(The GAZETTE *will pay $10.00 for each anecdote published. Submissions should be short and pointed.)*

NIGHT TRAINING FOR MARINES

By LtCol W. H. Simpson

NIGHT COMBAT CAN BE EASILY categorized as illuminated or non-illuminated attack or defense. Night attacks can be further broken down into supported attacks or unsupported attacks. Beyond this, all standard instruction concerns itself with methods to overcome the difficulties inherent with the reduced visibility. Some of the methods are: employment of fixed weapons fire, troop leading, simplicity of plan, secrecy and surprise, the difficulties of reorganization, limited objectives, co-ordination, rehearsal, training, techniques of movement and other such techniques which may be valuable. These are all basic problems which must be solved in order to successfully execute tactics at night and during other periods of reduced visibility.

It is evident from the field manuals that there is a need for special training for troops who are to be employed at night. However, other than the rehearsals mentioned, there is little offered to teach the unit commander how to go about this special training. Naturally, this results in a great deal of interpretation by individuals, and a considerable variation in results. The basic problem is more than mere application of tactical principles under reduced visibility conditions. This problem involves psychology and basic development of the individuals making up the training and fighting units, in order that they will be mentally and physically capable of applying the principles under training conditions, not to mention actual combat.

For example, it is quite possible for a 200 lb. Marine, blessed with what appears to be a perfect physique, and known to possess great stamina and to be well motivated; to be faced by a 100 lb. Chinese "captive" soldier, motivated only by fear. Both of these men being armed equally, the Marine could well be a poor match for the Chinese, with firearms, sticks, stones or fists if the contact were made at night. The reason? The Marine is blind because of his environmental background while his opponent's eyes are keen for the same reason. Yet, no given race or nationality has a better potential for night vision than any other.

There are definite directives in existence which are intended to eliminate such a situation as is given in the example above. The problem is recognized at the highest level as evidenced by CMC letters which specify "... a minimum of 20 nights of night training annually to include at least 2 exercises of not less than 5 consecutive nights."

This is the result of a later modification reducing the requirements for night training. I don't know why the requirement was reduced, but I strongly suspect that it is based upon administrative reasoning in some form. It is my opinion that our administration system forces our commanders to be "prisoners" in their offices during a majority of the "working hours." Other requirements as night training and its supervision are superimposed upon those hours, which are occupied by accomplishing paperwork, routine inspections, conferences and "being available." It is in this respect that I believe our system is defeating itself. Our infantry units are intended to be trained for combat at all times. Naturally it is easier to detect an administrative weakness than a training shortcoming; an administrative error can show up in a mess hall, a supply shed, or on a letter or form, while an error in training is not as readily discernible, nor as handily available. A clerk can be taught to find administrative errors, but training errors must generally be discovered by experts in training. It is a duty, to correct errors as they are detected. Since the majority of discoveries will

be of an administrative type, the corrections tend to focus the commanders' attention in this direction, both at the level of commission/omission and at the discovering headquarters. More and more time is spent in seeking perfection in administration, and as a direct result, less time is devoted to supervision of training, which is the primary justification for the existence of the unit.

It is beyond the scope of this article to solve or recommend a solution to the above problem, but it is apparent that our system is unrealistic. Much of the commander's time is occupied because of a shortage of a few qualified specialists, either in being, or by T/O. This is especially true at the battalion level which is where the staffs begin and at which the supervision of training could be most effective.

To return to the basic problem and to the high-level recognition of that problem, Gen A. A. Vandegrift in 1948 made the following observation, "Night operations are another field of tactics and doctrine to which we must give attention if we are to cut the hampering ties which bind us to past methods and thinking."

Let us focus our attention on other countries and their opinions of the same problem. The German magazine, *Militaerwochenblatt,* printed the following,

"To beat the Russian one must be a hunter. We must be at home in the woods and swamp. We must be able to find our way by night and in fogs as easily as in broad daylight. We must be able to stalk our enemy and creep up on him as a hunter on his prey. Whoever desires to train soldiers to fight against the Russians will get into the nearest swampland where he will train them day and night, summer and winter."

An order issued by Marshal Timoshenko in 1941 and captured by the Germans during their advance toward Moscow, encouraged the Russian troops to make more use of night fighting, close combat and fighting in the extensive forests. These three types of combat, he stated, were the forte of the Russians and the weakness of the Germans who placed too much reliance on their machines. At night and in the forests, he continued, mechanical equipment loses some of its effectiveness, and hand-to-hand fighting, for which the Russians have a traditional aptitude, comes into its own.

Having taken a brief glance at high level thoughts on night combat, the existing directives on the time to be devoted to training for night combat, and the instructions available in the field manuals, we arrive at the problem of how to increase the effectiveness of night training for combat by Marine infantry. The fundamental difference between daylight and night operations is the difference in visibility. This is brought out in the field manuals by the following, "When an illuminated night attack is made with visibility approximating daylight, the attack may be made deeper into the enemy position than in a non-illuminated attack. In such cases, the principles of daylight operations apply." Vision, more specifically, night vision, stands out as the key to the solution.

It is axiomatic that we must learn to stand before we can walk. It is important to know what tools we have and how they function before we try to use them. The requirements for night vision vary in proportion to the degree of darkness experienced. Operations taking place during moonlit and starlit nights, especially across snow covered terrain, may approximate daytime conditions. Very hazy, foggy, rainy, or overcast weather calls for reliance on the auditory rather than the visual sense and makes increased demands upon physical stamina and mental balance.

The reaction pattern to night operations is not uniform. In general, men originating from rural areas adjust quickly and easily, whereas former city dwellers take a long time and encounter many difficulties in getting used to the peculiarities of night conditions. Darkness acts as a strong stimulus to the imagination and this burdens the nervous system; a feeling of insecurity, which might eventually lead to panic, may be the outcome. The sensitivity of the eyes and ears differs between night and day, with the result that in darkness objects seem bigger and distances greater. The ears exaggerate sounds which would hardly be perceptible during the day.

Unfortunately, as a direct result of our advances with lighting, we are retarded in the use of our night vision capabilities; just as we ride rather than walk, whenever we can, we use artificial light to compensate for our dislike of darkness. Most of the current generation of Marines were able to use artificial lights long before they overcame their natural fear of the dark and this will probably be the case from this time on. Therefore, it is incumbent upon troop leaders to face the fact that their men are afraid of the dark and, just as probably, they themselves are too! It is certainly not a thing to be ashamed of, since it is generally a result of environmental circumstances, and further, it is common enough to be faced squarely. It will not go away if we ignore it. Men must be trained to realize that the problem exists in spite of loud protests to the contrary. This problem is universal, has always been, and always will be. It is instinctive to fear the unknown, and the inability to see produces many unknowns.

A step towards facing this problem could be made by following the general theme of the pamphlet, *Night Vision Sense,* which was put out by NAVAER for use by pilots. It is fundamental, informative, and has a humorous approach which would hold the interest and attention of most Marines. It would serve to show Marines that the problem is recognized, and that it was intended to solve the problem by training individuals to use all their organic "tools." It would teach them that by nothing but honest practice, could they overcome this functional shortcoming. By a little expansion it could be written to inform troops that there is no organic difference, or capability, between theirs and any other race or nationality.

It is not expected that the above information in itself will be the panacea. But it may serve as the motivation required to begin the training and practice necessary to accomplish the objective of training our troops to be able to fight offensively or defensively under all conditions of visibility.

The next step on the agenda is developing a realistic program of training. As was stated heretofore, there is too much room for interpretation in our present directives. There are practical tests in existence

LtCol W. H. Simpson, who is now Asst G4, 3d MAW as an air-ground exchange officer, has had many years experience as an infantry officer. Commissioned in 1942, he served with the 1st Bn, 8th Marines during WWII until he returned to the US in 1944 after Saipan. From 1946 to 1948 he served with the 5th Marines prior to an I&I tour. After this he became an instructor at Junior School. Returning to the FMF in 1954 he was with the 4th Marines and the 1st Shore Party Bn. In 1955 he was a student at the Senior School.

such as those being used by the US Air Force. They are: the USAF Eastman Night Vision Tester; The School of Aviation Medicine Portable Night Vision Tester; and the Radium Plaque Night Vision Tester. All of these give an accurate evaluation of the ability to see in the dark. These tests can serve to determine the effectiveness of past training and aid in planning future training. Perhaps even more important, it may serve to give individual men confidence. This is necessary to eliminate the nervous tension caused by a feeling of inferiority, and in turn, it further decreases the capacity for effective night vision.

What might constitute a realistic program for night training? Let's first look at some of what, I believe, are common solutions to the requirement for night training by otherwise fine troop leaders. One battalion in Korea whose companies were required to perform a minimum of 3 hours night training each week, habitually permitted those companies to muster up "available" personnel and march them down a road for one and a half hours, and then to return over the same route. This was in an area where mines were not a significant problem. Other units in Japan and the US permitted companies to employ this portal-to-portal solution to the requirement. The troops generally left the bivouac or barracks area before dark, had a break upon arrival in the training area, whereupon a large percentage of the troops lit up a cigarette and blinded themselves just prior to stumbling through the woods on a night "problem." The problem generally turned out to be an effort to avoid braining themselves by colliding into trees and branches, and from falling into ravines and old gun positions. Little can be gained by this type of training, if the term is applicable in these cases. Further, supervision by some key personnel was expedited by using flashlights.

It must be made known to every person concerned that any white light source, use of tobacco or alcoholic beverages while on, or just before, a night exercise will reduce night vision substantially. This will require constant supervision, since many men are incapable of self denial of a habit, even for a short period of time. Sneaking a smoke under a poncho while on watch in combat is not unusual and this is not necessarily due to ignorance. Troops must be taught and required to practice night exercises without continually coddling themselves with habits which serve to defeat the purpose for which they are being trained. As a battalion executive officer, I found it nigh impossible to keep lights and cigarettes from being used *flagrantly* throughout the battalion during black-outs. Troops realize that there is a certain anonymity in the dark and are quick to take advantage of it. On another occasion, rations being heated over open fires during the pre-dawn hour preceding a "surprise" assault and during "black-out" revealed an entire regimental disposition from an Aggressor OP. Self discipline must be taught and violations of rules must be corrected rapidly and disciplinary measures must be taken if we are to succeed in accomplishing the first field tests.

During the latter part of his life, Robert E. Lee was asked by a friend and admirer what would be the most important lesson she could teach her son in preparing him for manhood. Gen Lee's thoughtful reply was brief, but based upon a lifetime of outstanding experience. It was, "Teach him self denial, Madame, self denial." This particular lesson seems a form of cruelty to the average parent in this country these days and often is heard a positive statement, with a tone of pride, "I will see that my child will never do without the things I had to do without when I was a boy!" Unfortunately, the child of the above parent comes into the Marine Corps with little understanding of the need for any form of discomfort and will employ many ruses to avoid them. What officer has not heard that old gripe, "You don't have to practice being miserable"

Some of the ruses employed to avoid discomforts are done unknowingly on the part of the individual, that is to say, without malice aforethought; e.g., when troops are being trained on short rations, or expected to use field rations, it is not a far trip to the nearest man who will have providently filled his pack with candy, cookies, canned fruit, or whatever he chooses, in order to avoid hunger or to please his palate, no matter how short the training exercise may be. In fact, the shorter the problem, the more flagrant the violation will be, percentagewise. This is human nature and therefore, to be expected. However, it may negate the time and effort put into the training program. This is acknowledged and a corrective measure is submitted in Chapter 28 of the Department of Defense book entitled, *The Armed Forces Officer,*

"Though Americans enjoy relatively a bountiful and even luxurious standard of living in their home environment, they do not have to be pampered, spoon-fed and surfeited with every comfort and convenience to keep them steadfast and devoted, once war comes. They are by nature rugged men, and in the field will respond most perfectly when called on to play a rugged part. Soft handling will soften even the best men. But the weak man will develop a new vigor and confidence in the face of a necessary hardship, if moved by a leadership which is courageously making the best of a bad situation."

For those who are inclined to lean heavily on that part of the above quotation which says, "Once war comes" are reminded that we may not have the luxury of a 6 to 8 month training period such as we had during WWII.

There is no desire or intention to take away any mechanical means which may be advantageous to our troops during operations at night. On the contrary, it is necessary to use every advantage possible. The

fundamental means is organic to every Marine and it should be utilized to its best advantage. Mechanical means should be relegated to their proper position which is not a night operation per se, rather, it is a means to reduce and/or control the degree of darkness existing by employing artificial light, whether it be visible or invisible without special equipment.

It is a known fact that there is a tendency to acquire requirements as they become available and useful to the Marine Corps. It is just as well known that we have a requirement to reduce our combat weight and complexity. This is aggravated by our requirement for unit separation and for air transportability in atomic warfare. Obviously, an infantry battalion must learn to do without CDL tanks and searchlights and floodlights and burdensome infra red equipment in many circumstances. Therefore, the need is evident for a thorough training program for night combat minus the capability of controlling visibility artificially. Once the rudiments of operating without artificial lights are mastered, training with artificial light means is relatively simple.

Let us re-examine our requirements for night training. They are quoted in the first part of this article. These are the minimum requirements, of course, but it is my belief that the intentions and expectations of CMC will not be met in many units. And that the necessary minimum requirements for fighting those candidates, most likely to be our next enemy, at night will not be met by *any* unit of battalion size. German commanders with many years of practical experience advocate that up to 50 percent of all training be conducted at night, starting from the very first day of basic training. In their opinion it is unnecessary to devise a specific night training program. They advocate that the most important features on the weekly training schedule take place at night and that the lessons learned in the daytime be repeated and driven home during the hours of darkness. By shifting part of the regular schedule from day to night, one may achieve the dual purpose of toughening the soldier and making him a night fighter. It would be imprudent, indeed, to ignore or discredit those who most recently fought the Russians. Some of the greatest lessons of warfare can be learned from those who lost. Certainly, they would be in the best position to evaluate their own failures and their enemy's strongpoints.

On the basis of the above recommendation, it appears our night training program approaches the ridiculous. One point consistently ignored in our night training is not in the training itself, but in what to do with the troops after they have spent the night in field exercises. There is always the problem of convincingly explaining why a whole barracksful of troops is sleeping while everyone else is working. This is especially difficult when our daylight insomniacs are wandering around the regimental area or hanging around the exchange. In addition to the men wandering aimlessly about the area, the area police (or lack of it) becomes readily apparent to the regimental officer-in-charge of small details, and this usually comes to correction as the result of some form of pressure from the higher echelon, if not from some "saboteur" within the battalion itself. Further complications arise from the mess hall and in clothing details and in working parties drafted by headquarters outside the command concerned. All these points serve to undermine a solid night training program.

There is only one way to overcome these opposing requirements and that is to separate them. This is easier said than done. However, it is possible to plan a program which will require the majority of a battalion to remain in the field for a period of about 10 days. This will reduce the administrative requirements to an understandable few in the rear area. It will eliminate the happy, albeit semiconscious, wanderers from cluttering up the barracks area and from becoming distracting influences to those who are not intimately familiar with the training program. Messing can be conformed to meet the training program without a requirement for feeding routine meals to the daytime workers in the rear echelon. (This can be accomplished by a little liaison with a neighboring mess hall.)

It is difficult to get men to change a lifetime habit of sleeping at night, but since fatigue reduces night vision, it is necessary to ascertain that men remain in their sleeping gear and that they maintain silence during the period allocated for rest. It will only take a few days to accustom the troops to sleeping during the time so intended. Elimination of liberty and conjugal commitments will not be prohibitive because of the length of the night training period, but it would be within the spirit of rewarding effort to grant a 4-day liberty at the end of the night training period. The final day could be used for returning to the barracks area, inspections and administrative requirements.

If the training schedule were broken into thirds, rather than the customary quarterly training periods, it would be possible to send one battalion out of each infantry regiment, into the field for a 10-day night training period each 6 weeks. In a 16- or 17-week period, each battalion would have two such periods and each regiment would have one such period. Above the regimental echelon, little value would be derived from extended night training. However, by reinforcing regiments and battalions during their night training periods, individual Marines and selected units from division and separate battalions could receive their required night training.

It is up to all of us to adequately train our troops to fight any enemy with which we may be confronted. Your success — even your life — may depend completely on your ability to follow this proven rule of nature: See the enemy before he sees you!

USMC

AIR-MOBILE MEDICAL SUPPORT

By Cdr T. H. Wilson, Jr.
MC USN

THE NAVY MEDICAL UNITS WITHIN the Fleet Marine Force have traditionally sought to provide close medical support for troops in the assault. Their efforts have been rewarded by a reduction in the mortality rate among casualties who survive to reach a hospital, and by an equally satisfying reduction in the morbidity associated with war wounds.

In order to keep pace with the new concepts of amphibious warfare and to make provision for the expeditious handling of mass casualties, the medical department within the Fleet Marine Force has had to devise and test new technics. Certain of these have been originated in the 1st Medical Battalion (Reinf), 1st Mar Div (Reinf), FMF, Camp Pendleton, California, and form the basis of this article.

Realizing that units of the Medical Battalion must have a helicopter lift capability, the characteristics of the HRS-type helicopter were studied. Under average conditions, the HRS can carry 4 men with their combat packs, or 700 lbs. of equipment. This equipment can be internally loaded if its dimensions are satisfactory. With these facts in mind, the organization and equipment of a Collecting-Clearing Com-

pany (the 60-bed mobile hospital that traditionally supports a Regimental Landing Team) were studied and a loading plan drawn up to conform with the performance capability of the HRS helicopter. This plan was repeatedly revised until it gave the proper priority to certain personnel and types of equipment. Authority was then obtained to conduct a field test in which an organization, in theory, was in dire need of considerable medical support but was cut off from access by surface transportation. A Collecting-Clearing Company was to be flown to the combat area from an airfield in the rear. In November 1955, 6 HRS helicopters, using the internal loading method, demonstrated that they could rapidly and effectively move an entire 60-bed hospital from one location to another. The clearing station could then rapidly be re-assembled and put into operation. In this particular exercise it was clearly demonstrated that the 2 major considerations in the rapidity of movement of such an installation are the number of helicopters available and the distances involved.

Subsequent tests proved the superiority of palletizing equipment, and both rope nets and reinforced aluminum wire baskets were found to be satisfactory for external lifting. Using the external loading method and accepting 1,000 lbs. or 7 combat-laden men as the maximum load, HRS helicopters transported an entire Collecting-Clearing Company plus its 10-day resupply block during a Desert Exercise in February 1956. The distance involved was 10 air miles and the time required for the move was 90 minutes. This exercise demonstrated the fact that atmospheric conditions place varying restrictions on payload capability, and make it imperative that the weights of various items of equipment be known to those who do the actual loading.

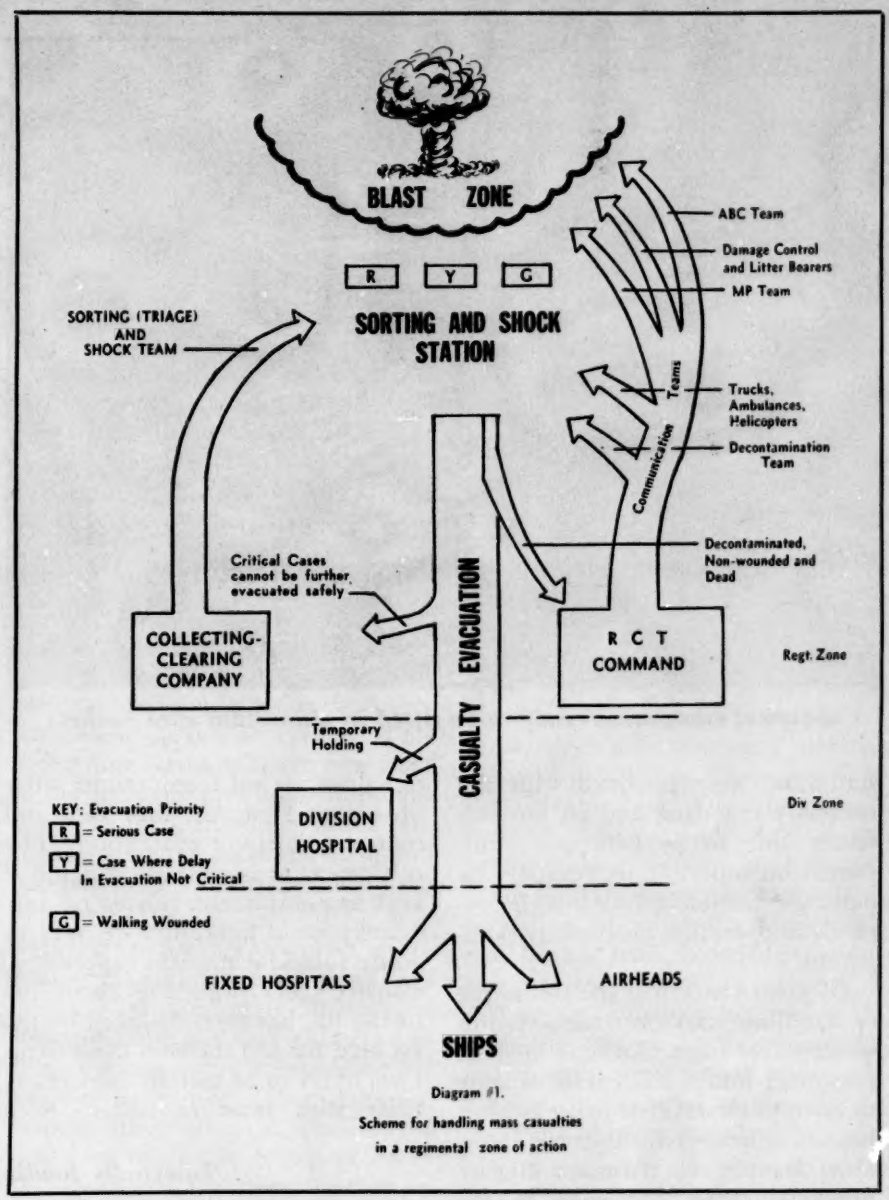


Diagram #1.
Scheme for handling mass casualties in a regimental zone of action

The T/E, as outlined in the current L-series, was adhered to as closely as possible in these tests. Obviously, if helicopters were to be used to replace ambulances and trucks in the theoretical situations envisioned, items weighing over 700 to 1,000 lbs. could not be carried, and therefore ambulances, trucks, water trailers, surgical trailer, and the 9.4 KVA generator were eliminated. Prior testing disclosed that the 2.5 KVA generator, as used by the Communication Company, could provide all the power necessary for routine lighting plus such special equipment as suction apparatus, operating room lights, blood refrigerator, and the x-ray unit. However, the quality of x-rays cannot be relied upon to be entirely satisfactory when taken with the small generator.

A workable plan having been established, the 3 Collecting-Clearing Companies and the 2 Hospital Companies, which comprise the Medical

---

Cdr T. H. Wilson, Jr., MC USN, was Commanding Officer of the 1st Medical Bn when this was written. He states the article was "submitted with the hope that it may be of some interest not only to medical officers and medical personnel who work with Fleet Marine Force units, but also to Marine officers and personnel who all too frequently have about as much knowledge of the role of the medical department as we have of tactics and related military matters! The article is based on ideas which have been tested within the 1st Mar Div after considerable research and development within the 1st Med Bn. To the best of my knowledge these ideas originated within this organization, but if others have tested similar or related concepts perhaps the printing of this article will stimulate comment."

Dr. Wilson was graduated from Harvard Medical School prior to being commissioned in the Navy and is now Commanding Officer, USNH, Oakland, Calif.

Hospital equipment ready to be lifted in aluminum wire baskets

Battalion, were provided with the necessary test data, and all are currently able to be helicopter-transported on order. That resupply by helicopter could maintain such hospitals in operation indefinitely is apparent.

Of great concern is the technique of handling mass casualties, victims of a nuclear blast. To send medical personnel into a nuclear blast zone to attempt First Aid or to act as litter bearers is neither feasible nor desirable. Rather, it is necessary that individual officers and men in the stricken zone help each other and themselves in rendering life-saving first aid, using whatever material is at hand, and that they be guided and transported to the safe edge of the blast zone by Damage-Control Teams, Military Police, ABC Teams, and Litter-Bearer Teams provided by the appropriate higher echelon. Written data and field tests suggested to the Medical Battalion that a Sorting (Triage) and Shock Team, derived either from a Collecting-Clearing Company or a Hospital Company, should be flown to the edge of the blast site, there to establish a Sorting and Shock Center in an area that had been monitored and declared safe. The Sorting and Shock Team, as currently designed and used within the 1st Mar Div, is composed of one medical officer and 16 corpsmen, whose mission is to sort casualties, record them, render what life-saving First Aid they can, and control priority of evacuation. The equipment to accomplish this job is kept to a minimum, relying on adequately rapid helicopter delivery to assure sufficient medical supplies. A casualty block, weighing about 200 to 300 lbs. has been designed by the 1st Med Bn and includes those items most likely to be used in large quantities with mass casualties. Such "blocks," if standardized, could be stock-piled for immediate use, and would not be utilized except in the event mass casualties were created by a nuclear blast.

The chain of evacuation will differ from the traditional pattern, and will have to be determined for each separate operation. The dead, and those who are not wounded but are merely in need of decontamination from minor degrees of radiation must not get into the chain of casualty evacuation. The division medical facilities, as currently operative, must be kept as mobile as possible, which means that mass casualties will, in general, by-pass these facilities in their evacuation in the rear.

During major regimental landing team FEXs at Camp Pendleton in April and May 1956, these concepts were field-tested under varying tactical and logistical situations, weather conditions and with varying availability of helicopters and surface transportation to carry patients to the rear. The great interest and full co-operation of the line officers and men involved was noteworthy. Critical appraisal, both by line and medical officers, indicates that the new concepts of dealing with mass casualties and of providing close medical support under new conditions of warfare are flexible, practicable and efficient. USMC

Internally loading a field autoclave

BUILT-IN REPLACEMENTS

By MSgt C. J. Evers

"IF I LOSE THAT MAN, WE MAY as well close up shop!"

How often is this statement heard reverberating within the walls of the personnel offices throughout the Marine Corps? The fact that it is ever heard is an indication that the statement, or variations of it, is heard too often. Even in the present-day Marine Corps which includes requirements for personnel with highly technical skills, there is no such creature as an indispensable Marine. Whenever any section leader makes the statement that his section will cease to function efficiently because of the loss of any one individual from that section, he is inadvertently admitting failure as a leader and supervisor. He has obviously been making the mistake of "placing all his eggs into one basket." Of course, the excuse invariably is that this just happens to be the only "basket" he has. To such a supervisor, one can only say that he should have started weaving a new basket in sufficient time to allow him to start placing some of his eggs into it before the old one disintegrated.

Let's face it. No person ever learns to shoulder responsibility if he is never afforded an opportunity to do so. You may give a Marine his promotions each time he becomes eligible for advancement, but if he is not also given responsibilities commensurate with his new rank, he will still have only the value of a private when he reaches the rank of master sergeant. He may be technically qualified in his military occupational specialty to a high degree, but unless his duty assignments carry with them the responsibility commensurate with his rank, his promotions serve only to award him an increase in pay instead of being an indication of the degree of responsibility with which he can be entrusted. Therefore, it is imperative that section leaders and supervisors utilize the men assigned to them to insure well-rounded training for each individual in the job performed by the section as a whole. Also, to assign a proportionate share of the responsibilities of the section to each individual. If this is done diligently and conscientiously within each working unit, no one need ever fear that the loss of any one man will seriously jeopardize the efficiency of his unit.

Too many of us have a tendency to sit back and relax as soon as things are running along smoothly within our particular sections. This is the time for us to assign new tasks to our men and give them an opportunity to learn the other man's job, thus broadening his knowledge and increasing his value to us and to the Marine Corps.

It is a known fact that with an increase in knowledge of one's job comes a proportionate increase in self-confidence and that with self-confidence comes an increased desire for more responsibility. This desire for responsibility must be fulfilled in order for this circle to repeat itself. If he is given the responsibility he desires and deserves, he will endeavor to gain new knowledge of his job, thereby giving him still more self-confidence and a desire for still greater responsibilities. This cycle can be repeated indefinitely each time, increasing the Marine's value not only to your section but to the Marine Corps as a whole.

I doubt if there is anything much more disappointing than to have a Staff NCO report for duty only to find that he is acquainted with merely one or two phases of his military occupational specialty. This is because he has never been afforded an opportunity to increase his knowledge and experience by variety in his duty assignments within his specialty. For instance, there is much more to the work of an Administrative Man (0141) than the typing of correspondence or the maintaining of service records. A glance at the MOS Manual will soon reveal that there are 6 specific qualification requirements for corporals, 9 for sergeants, 10 for staff sergeants, 13 for technical sergeants and 14 for master sergeants. Any one of these requirements could conceivably comprise the entire duties of one billet depending upon the rank of the Marine and the level of command at which he may be assigned. If he continues to work in that same billet during his normal tour of from 2 to 3 years, he will, no doubt, become very proficient in one phase of his specialty and be a great asset to the work being performed within that section. However, what has it done for his future? What has it done to increase his value to the Marine Corps? During this time he could have progressed in rank from private first class to sergeant but his knowledge, his experience and his value to the Marine Corps is still at the private level. Of course, it is realized that the individual is expected to keep current in all phases of his military occupational specialty regardless of what his assignment may be, but book knowledge cannot compare to practical experience in making an indelible impression on one's memory or in increasing the individual's professional value. It takes a combination of the two to make the training complete.

I do not advocate frequent transfers or reassignments to accomplish this goal of well trained Marines. However, I do heartily recommend the rotation of assignments within a unit or a section so as to afford each individual an opportunity to receive as much practical experience as the unit has to offer in all the qualification requirements of his military occupational specialty. I also advocate the sharing of responsibilities of a job commensurate with the individual's rank and capabilities.

I do not even pretend that this is a panacea for all the ills that assail us in our personnel problems. It cannot, for instance, dispel personnel shortages. It can, however, ease the pain considerably.

This is a "do-it-yourself" program. Instead of depending upon the personnel office to procure and supply us with key personnel, let's train our own—do it yourself! USMC

A SUMMARY OF
Russian Helicopter Activities

By E. K. Liberatore
Director of Engineering, Flettner Aircraft Corp.

Reprinted from the Newsletter *of The American Helicopter Society.*

SOVIET INTEREST IN HELICOPTERS began in 1925, and in the intervening years systematic attempts were made to solve the problems of helicopter flight. Several research vehicles were built during the 1930-1945 period. However, the work never had a high priority, and it remained for the Western nations to show Russia successful configurations.

Soviet engineers currently associated with helicopter developments are Bratukhin, Kamov, Mil and Yakovlev, the fixed wing designer who is credited with one helicopter project. The work of these engineers is discussed below.

BRATUKHIN Omega I

BRATUKHIN

I. P. Bratukhin is a rotary wing engineer whose work dates back to 1925. During the 1930s, he developed the single-rotor configuration using various means for counteracting rotor torque.

In 1941, the Omega I was flown. This was a 2-place craft with lateral rotors mounted on outriggers. Two engines were also located outboard. These powerplants were M-11 radials, rated at about 140 hp. This craft was reported in production. However, it appears it was never a successful design.

In 1948, the Omega II appeared. The same rotor arrangement was used, but the craft was larger and aerodynamically cleaner than the first version. The Omega II carried a crew of 2 and 6 passengers. Two ASH-21, 7-cylinder radial engines were used having a take-off rating of 750 hp. At least one was built, and it appears development has been dropped.

In 1953, the Omega III was reported under development. The craft is designed to carry 32 passengers. Lateral rotors are used. However, the powerplants are located in the fuselage. Two ASH-90 engines, similar to the Wright Duplex Cyclone, deliver a total of 4,000 hp for take-off.

KAMOV Helicopter

KAMOV K-17 Variants

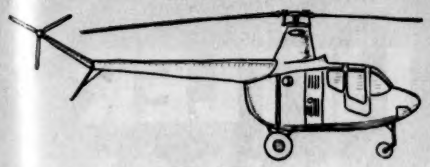
KAMOV

N. I. Kamov began his rotary wing career in the autogiro field during the 1920s. In 1930, he was one of the two engineers who produced Russia's first autogiro, the KASKR-1. During the 1930s, Kamov was one of the more active autogiro designers. The A-7 series by Kamov saw military service from 1938 through the start of World War II.

The Kamov helicopter designs are one-place coaxial rotor types, called Vertolet (Vertical Flyer). The K-17 appeared in 1948. The prototype utilized two 3-blade rotors with tapered blades. These were driven by an Aubier-Dunn type engine. The original version utilized an open framework carrying pontoons. Around 1950, a later model appeared with the pilot enclosed in a cabin.

In 1954, an Army Vertolet was demonstrated at Tushino. This latest version carried 2 large vertical tail surfaces replacing the small tail of the prototype.

A model KA-10 has also been reported. This craft utilized a 50 hp engine.



MIL Mi-1

MIL

Like Kamov, M. L. Mil started his rotary wing career in the autogiro field during the mid-1930s. As a member of ZAGI, he delivered one of his first papers at the Third All-Union Conference on Aerodynamics. The paper was on the take-off run of the autogiro. Until recently, his name has been associated with research and development rather than design and construction. However, the first successful helicopter in Russia has been the Mi-1 (Hare). The craft appeared in 1951, and it resembled the Bristol 171. This 4-5 place machine is powered by a 640 hp ASH-21 radial engine. The gross weight is approximately 5,400 lbs., and the rotor diameter 48 feet. The Mi-2 has a 3-blade rotor with fully articulated blades, including friction dampers.

The Mi-4 Helicopter

The Mi-4 helicopter has the code designation "Hound." It resembles the Sikorsky H-19, but it is in the weight category of the H-34. The "Hound" appears destined to be the first rotary wing "work-horse" in the USSR. These machines are now used in military and civil operations.

During 1954-55, they participated in the North Pole operations, being based on Ice Floe Stations drifting in the Arctic Circle. In addition to routine reconnaissance, the helicopter was used for rescue in ice breakups. In one operation, the ice floe was breaking up, threatening to divide the camp into 3 parts. The helicopter was used to locate a new camp site to which material and personnel were transferred. In another breakup, a mechanic was detached from the main floe. The rescue was accomplished by helicopter.

The Mi-4 helicopter has also been used in geological survey in the Siberian Tiaga, the thick woodland below the Arctic Circle. One machine was used in 1955, and for the 1956 operations, it was planned to use 12 of these helicopters.

In late 1955, the Russians announced plans for commercial helicopter operations around Moscow. On short trips, the machine could carry 10 to 15 passengers.

Approximate characteristics of the Mi-4 are as follows:

Rotor Diameter (feet)	56.5
Normal Gross Wgt (lbs.)	12,000
Normal Useful Load (lbs.)	4,400
Powerplant, One ASH-62	1,000 hp
Disc Loading (psf)	4.78
Maximum Speed (mph)	130

Mi-4 (Hound) Operating in the Tiaga

YAKOVLEV

The Yak-24 tandem rotor helicopter (Horse) is credited to A. Yakovlev, the noted fixed wing designer. The rotor systems appear to be 2 units as used on the Mi-4. It is also possible that the main transmissions are essentially those of the Mi-4. The gross weight of the craft is approximately 30,000 lbs. Two engines are used with a total rating of about 2,000 hp. The normal crew of 4 includes 2 pilots, a navigator, and a radio operator. A maximum payload of 4 tons has been reported.

This resume and the accompanying illustrations show that Russia has come abreast of us in yet another field of engineering. There is little novelty in their designs. However, their fields of application have been remarkably diverse considering the relatively short period of time they have been used operationally.

US MC

YAK-24 (Horse)

WHY HITLER INVADED RUSSIA—AND FAILED

By Capt B. H. Liddell Hart

THE WHOLE FACE OF WORLD War II changed when on 22 June 1941 Hitler invaded Russia. That stroke, aimed at overthrowing Stalin's power, led to his own downfall—and Germany's. It was also Britain's salvation, for until that moment her prospect of survival was very dim. Yet, Hitler came much closer to a crowning success than is commonly realized now. He fell short largely through his own underlying timidity—and also because neither he nor his General Staff had sufficient faith in the new idea and instrument to which they owed their startling initial successes in the war.

Hitler's invasion of Russia almost

coincided with the anniversary of Napoleon's equally fatal venture. It was only one day ahead. That slight margin of time in advance was symbolical of the way that Hitler followed in Napoleon's footsteps and, like him, was just a shade too late at every turn — although going further and holding out longer.

Napoleon was forced to retreat from Russia before the end of the year, and the Russians entered *his* capital in April of the second year following his invasion. Hitler was not driven out of Russia until 3 years had passed, and the Russians did not enter *his* capital until April of the fourth year. He had penetrated twice as far into Russia as Napoleon had done, though failing to repeat Napoleon's illusory success in entering Moscow. His deeper penetration was due to superior means of mobility — his Panzer forces — to conquer space quickly, but it failed because he had not a deep enough grasp of the new conception. A further cause of his failure was the shallowness of his policy, which was self-frustrating. If he had gone into Russia as a liberator, instead of a conqueror, his path would have been smoothed. That was shown by the welcome his army received at the start — before the arrival of his Nazi gangsters turned the people against him.

History repeated itself also in the auxiliary effects of the aggressor's suicidal step. It brought Britain reprieve from a situation that appeared hopeless in the eyes of most people outside her own insular boundaries — for they could see how desperate was the position of a small island on the edge of a hostile continent, which enveloped it more closely than in Napoleonic times. The value of the sea-moat was diminished by the development of air power. The industrialization of the island had made it dependent on imports, and thus multiplied the menace of submarine power. The British Government's course in continuing the war after the fall of France, and rejecting any peace offers, was bound to prove fatal unless the two remaining Great Powers, Russia and America, were brought into the struggle. Otherwise the concentrated development of sea and air attack on Britain's lifeline would eventually bring her collapse, even without actual invasion.

The British people, however, took little account of the realities of the situation. Churchill's speeches helped to correct the depression of Dunkirk, and supplied the tonic they wanted. They were exhilarated by his challenging note, and did not pause to ask whether his confidence had any sound strategic foundation. Deeper than the influence of Churchill was the effect of Hitler. His conquest of France and near approach to their shores aroused them as no earlier evidence of his tyranny and aggressiveness had done. They reacted once again in their habitual way — intent to keep their teeth in Hitler's skin at any cost. Never was their collective characterization as a bull-dog so clearly demonstrated, and justified, in all its sublime stupidity.

Once again a conqueror of the West was confronted by a people who "did not see that they were beaten." Hitler had regarded them as essentially "practical," and was thus baffled that they did not see the futility of fighting on nor recognize that his offer to make peace unconditionally, without exacting any indemnity or surrender of property, was extraordinarily moderate in the circumstances. In that state of bewilderment he wavered in uncertainty as to what he should do next, and then turned in the same direction as Napoleon, with the same idea — that pushing Russia out of court would pave the way for settlement with Britain.

The trend of his thought can be traced in the captured records of his conferences. It was made still clearer by the account I had from Gen Warlimont, the senior surviving member of Hitler's staff in the Supreme Command — since Keitel and Jodl were hanged — who was in close touch with the way that Hitler's mind was running during the year between the fall of France and the attack on Russia. Summing up his impressions Warlimont said: "The answer to the question why Hitler invaded Russia is that he found himself in exactly the same situation as Napoleon. Both men looked upon Britain as their strongest and most dangerous adversary. Both could not persuade themselves to attempt the overthrow of England by invading the British Isles. Both believed, however, that Great Britain could be forced to come to terms with the dominating continental power, if the prospect vanished for the British to gain an armored arm as an ally on the Continent. Both of them suspected Russia of becoming this ally of Britain's. Both recognized this danger to be gradually increasing with the prolongation of the war. Both were convinced that the central European power could not allow the peripheral powers (Britain and Russia) to wait for the most favorable moment in order to quench the heart of the Continent between them. Therefore both men, Hitler as well as Napoleon, were of the opinion that they had to strike in time — being, consciously or not, in a position of strategical defense."

It is evident that Hitler's victories had not relieved his underlying fears. Immediately after his march into Poland in September 1939, he had become afraid of what he had started. When his first peace offer to France and Britain was then rebuffed, his exaggerated fears had led him to feel that he must defeat France in order to make Britain agree to peace. He did not dare to play a waiting game to see whether the French would grow tired of the war, as many observers thought was likely. In that fearful mood he had decided to launch an offensive in the West, in the face of the doubts and protests of his generals.

As is shown by the documents we captured at the end of the war, he argued that a long-drawn-out war with France and Britain would exhaust Germany's resources, and expose her to a fatal stab in the back from Russia, his temporary partner. At a time when most of the world was impressed with the power of Hitler's Germany compared with the weakness of France and Britain, Hitler himself was feeling — as he told his generals — that time was working against Germany and that her enemies would soon outstrip and crush her if he waited.

But when he had overrun and knocked out France by his *blitzkrieg* strokes, his fears revived as soon as he saw that Britain was still unwilling to make peace. Although he had captured most of her stock of arms in France he began to picture her as

growing in strength much quicker than she was. He also began to imagine that her unwillingness to make peace was due to secret promises of Russia's early intervention on her behalf if she continued the fight against him. He saw that the way to subdue Britain was to cut off her supplies by an ever-tightening submarine and air blockade, but he did not dare to concentrate his resources on that sea-and-air effort while the Russian army remained on the board, as a threat to Germany on land. So he argued that the only way to make Germany's flank secure was to attack Russia.

Such reasoning is common in military minds—a famous British statesman long ago remarked: "If a nation relied on its military experts, it would find its frontier pitched on the moon." But in Hitler's case the desire for security was pathological. Aggressiveness in an individual man or woman usually springs from a sense of insecurity, and Hitler was one of the most evident cases of that counter-tendency. He differed from most of his fellows-in-fear in that he had the power to shape the course of many millions of people.

In regard to Russia his fear-reactions were all the more intense because anti-Bolshevism had long been his most profound emotional conviction. The close relationship between Nazism and Bolshevism sharpened his antipathy. His hatred was nourished by envy. That often came out in his conversation. When, for example, his own generals expressed doubts about his decisions or raised objections, he used to talk enviously to his circle about the Bolshevists' good fortune in having an army completely impregnated with their own ideology, and about the ease with which Stalin could get rid of generals who displeased him.

Hitler's combined hate, envy and fear of Soviet Russia was not allayed by the 1939 pact that had cleared his way to victory in the West. His smouldering suspicions were fanned by Stalin's actions.

Early in June 1940, while Hitler was still fighting in France, Stalin had seized the opportunity to occupy the 3 Baltic States—including Lithuania, the most westerly, which had been assigned to the German sphere of influence under the secret clauses of the Soviet-German pact. Hitler felt that his partner had taken advantage of him while his back was turned. Immediately after that, Stalin delivered a 24-hour ultimatum to Rumania, demanding the restoration of Bessarabia, which had formerly belonged to Tsarist Russia — and when Rumania yielded to the threat, the Russian forces poured in at once. That placed them close to the Rumanian oilfields on which Germany depended, now that the British navy had cut her off from overseas supplies.

Hitler became acutely suspicious of Stalin's intentions, and began to feel that he must tackle Russia before completing the consolidation of his Western victories by defeating Britain. In July, only a few days after he had reluctantly ordered preparations for a cross-Channel attack, he set his staff to work on the alternative plan of attacking Russia.

For the moment he seems to have been thinking of the stroke as a riposte in case the Russians tried to seize the Rumanian oilfields. A few weeks later he began to reinforce his slender force in Poland — at first with only 12 divisions. But the idea of being ready to execute an offensive diversion soon developed into that of a major invasion — to forestall the particular threat to the oilfields by wiping out the whole danger.

In mid-September reports came that the Russian propaganda service had switched to a line of anti-German talk within the Red Army. This showed the Russians' suspicious reaction to the first increase of the German forces in the East, and their promptness to prepare their troops for a Russo-German conflict. But to Hitler's mind it was evidence of their offensive designs. Over and over again as the months went on he said, to Jodl and others, that Britain must be hoping for Russian intervention, or she would have given in. Already there must be some secret agreement. The dispatch of Sir Stafford Cripps to Moscow, and his conversations with Stalin, were confirmation of it. Germany must strike soon, or she would be strangled. Hitler could not see that the Russians, likewise, might have fears of his aggression.

On November the 10th Molotov arrived in Berlin to discuss a wide range of questions, including the German suggestion that Russia should definitely join the Axis. At the end of the conversations an agreed communique was issued, saying — "The exchange of ideas took place in an atmosphere of mutual trust, and led to a mutual understanding on all important questions interesting Germany and the Soviet Union." Diplomatic language never had a more hollow ring. The German Foreign Office regarded the talks as moderately satisfying, but Hitler focused on the Russians' hesitation to join in the Three Power Pact, and regarded their attitude as sinister evasiveness.

After Molotov left, Hitler saw a number of his executives and made it plain to them that he was going to invade Russia. Their attempts to dissuade him from the venture were vain. When they argued that it meant war on two fronts — a situation which had proved fatal to Germany in the last war — he retorted that it was impossible to rely on Russia remaining quiet until Britain's resistance was broken.

By this time the offensive plan had been completed in detail and tested in a couple of war games. The preparation and contemplation of vast strategic plans always had an intoxicating effect on Hitler — as has happened even with democratic statesmen who have a martial taste. The doubts which his generals expressed, when he disclosed the trend of his mind, merely served to make it more definite. Had he not proved right on each issue where they had doubted his capacity to succeed? He must prove them wrong again, and more strikingly — their doubts showed that, for all their subservience, they still had an underlying distrust of him as an amateur.

On December 5th, the Chief of the General Staff, Halder, submitted a full report on the plan. On the 18th Hitler issued "Directive No. 21 — Case Barbarossa." It opened with the decisive statement: "The German armed forces must be prepared to crush Soviet Russia in a quick campaign before the end of the war against England." . . . "The mass of the Russian Army in Western Russia is to be destroyed in daring operations by driving 4 deep wedges with tanks, and the retreat of the en-

emy's battle-ready forces into the wide spaces of Russia is to be prevented." The directive went on to say that if these results did not suffice to cripple Russia, her last industrial area in the Urals could be eliminated by the Luftwaffe. Preparations for the invasion were to be completed by May 15th.

On January the 10th a fresh treaty was signed with Russia that embodied the results of the November conversations with Molotov on frontier and economic questions. The surface was thus made to look smoother. But Hitler's private view was expressed in his comment that Stalin was an "ice-cold blackmailer." At the same time disquieting reports came from Rumania and Bulgaria about Russian interference there.

On the 19th Mussolini came on a visit and Hitler spoke of his uneasiness about Russia, although he did not disclose his own intention to attack. But he made the significant remark: "Formerly Russia would have been no danger at all, for she cannot imperil us in the least; but now in the age of airpower, the Rumanian oilfields can be turned into an expanse of smoking debris, by air attack from Russia and the Mediterranean, and the life of the Axis depends on these oilfields."

On 3 February Hitler approved the final text of the "Barbarossa" plan, following a conference of his military chiefs at Berchtesgaden, in which the points of the plan were unfolded. The enemy's strength in Western Russia was estimated as 155 divisions, including 60 tank brigades. The Germans could only muster 121 divisions, of which 17 were armored, for the attack. Moreover the number of armored divisions had only been raised to that figure by halving the scale of tanks in them — a dilution, contrary to the views of the tank experts, that Hitler decreed to increase the apparent number of such divisions.

The comparative figures did little to allay doubts among the executive generals, since it showed that, far from having the odds in their favor, they were being launched on the invasion with markedly fewer troops than the enemy, and a much smaller number of tanks — the decisive weapon.

Numbers were barely balanced on the main attack-front north of the Pripet Marshes, where the Panzer forces of Guderian and Hoth formed the spearhead of von Bock's group of armies. On the front south of this marsh-belt, the scales were heavily adverse. Von Kleist — who here commanded the Panzer spearhead of von Rundstedt's group of armies — told me that he had only 600 tanks while "Budenny's Army Group facing us had some 2,400 tanks. Apart from surprise, we depended for success simply on the superior skill and training of our troops."

Hitler's original time-table was upset by events in the Balkans. He had a deep fear of British intervention in the Balkans, close to his Rumanian sources of oil supply, and that fear increased after Mussolini had attacked Greece in October without consulting his partner. Hitler was very annoyed, and found little consolation in the repulse that the Italians suffered. For the appearance in Greece of a small instalment of British aid obviously foreshadowed that a larger one would follow as soon as Churchill could manage it — as he did. So Hitler had decided that he must occupy Greece in order to forestall Churchill, and cover his own Balkan flank. So in planning his Russian move he arranged to deal with Greece as a preliminary. But on March 27th the Government of Yugoslavia, which had just made a pact with him, was suddenly overthrown by a revolt that the British Secret Service helped to engineer. The result was that Hitler had to make a bigger effort, and detach larger forces to subdue Yugoslavia simultaneously with Greece. Both were quickly overrun, and the British were driven to re-embark. But when Hitler took the decision, he had felt compelled to put off the invasion of Russia from mid-May to mid-June.

That left Hitler with less time to overcome Russia before the Russian winter intervened. It gave Stalin more time to discover Hitler's preparations and to make counter-preparations.

The greatest puzzle of the invasion, and one that has been little discussed, is why the Russians were taken by surprise — and whether they really were.

The British Intelligence Service obtained remarkably good information of Hitler's intentions long in advance, and conveyed it to the Russians. They even predicted the exact date of the invasion — a week before it was finally fixed! But their repeated warnings were received with an attitude of disbelief, and of continued trust in the Soviet-German Pact, which the British found as baffling as it was exasperating. Nevertheless, the general view was that the Russians were genuine in their disbelief, and that the German attack came as a surprise to their leaders as well as their troops.

Such a view is hard to reconcile with the indications of the Russian broadcasts *beforehand*. From April onwards they contained significant hints of precautionary measures, while showing an awareness of German troop movements—although at the same time they condemned British and American attempts to sow discord between Russia and Germany. A broadcast on June 13th, in Stalin's characteristic style, remarked that "the dispatch of German troops into the east and northeast areas of Germany must be assumed to be due to motives which have no connection with Russia" — a remark that might well encourage Hitler to assume that his deception program had here succeeded in making the desired impression. Double bluff can be met by redoubling. The same broadcast answered foreign reports of the call-up of Russian reservists by explaining that this was merely for training prior to the usual summer maneuvers. On June 20th Moscow wireless announced that the civil air raid defenses were to be tested "under realistic conditions" on Sunday, the 22d. That was remarkably apt timing.

When I questioned the German generals at the end of the war, they said that they had found little sign of Russian offensive preparations near the border — and thus felt that Hitler had misled them when he had declared that the Russians were about to attack. But they mentioned finding bigger military preparations further back — which suggests that Stalin, far from being hoodwinked by Hitler, was planning to catch the invading forces in a trap.

When the climax came, and the maneuver of wits gave place to the maneuver of weapons, Stalin was

well-placed to trap Hitler's invasion. But he was let down by the defects of his forces in equipment and training — perhaps, also, by overconfidence. The technical efficiency of the German troops, increased by 2 years' war experience, for a time retrieved Hitler's chances.

Early on 22 June the Germans swept across the border, with their Panzer forces leading. On the main attack-sector, a wide river, the Bug, formed the border, but a number of Guderian's tanks crossed it under water, travelling on the river-bed. For they had been fitted with a long pipe for "breathing" when submerged, a device that was adopted by German submarines later in the war. By the first evening Guderian's tanks were 50 miles behind the Russian front. On the sixth day both he and Hoth had reached the city of Minsk, 200 miles inside the border. Their converging drives had cut off a great mass of the Russian troops in the forward zone, and although part managed to wriggle out of the net, nearly 300,000 were captured. Much to Guderian's exasperation, however, he had been told to pause and help in the rounding up. Even so, his leading corps reached the Dnieper river-line on July 3d. (It is of interest that this corps was commanded by Geyr von Schweppenburg, who had formerly been Military Attaché in England, where the idea of such deep thrusts by armored forces had first been suggested and demonstrated, long before most soldiers dreamed of such a possibility.)

In reaching the Dnieper the Germans had advanced 320 miles, more than half way to Moscow — in 12 days. On other sectors the advance had gone nearly as fast. This caused a wave of optimism even among the generals who had been most apprehensive about Hitler's decision to invade Russia. The cautious Halder wrote in his diary: "It is probably not an exaggeration that the campaign against Russia has been won."

It was found, however, that Russian reserves had arrived on the scene and were holding the river-line. The German higher command then thought it best to wait until their own infantry masses came up, but that would have meant up to a fortnight's delay, so Guderian decided to tackle the Dnieper with his Panzer forces alone. His attack was successful and after overcoming the Dnieper line on July 10th, he reached the city of Smolensk on the 16th and drove quickly on to the Desna river. That was more than 450 miles from the border, and barely 180 miles from Moscow. A further 200,000 Russians were put in the bag at Smolensk.

All this had been achieved in less than a month, and several months remained before the winter. Yet Moscow was never attained, and Hitler's invasion faded out in disastrous failure, after becoming stuck down in the autumn and winter snows.

Why did it fail? While the Russian winter was ultimately fatal to the invaders, it is evident that this was not the primary cause — as both the Germans and many of their opponents are apt to regard it. Britain's war-leaders have sought to justify their ill-fated decision to land an army in Greece by claiming that it made Hitler postpone his invasion of Russia, and thus saved her. But it was the political coup d'etat in Yugoslavia, not the Greek campaign, that caused the postponement. Moreover, in any case Hitler could not have launched the attack in Russia until mid-June, as May was a very wet month that year. The Bug was still in flood and the whole frontier-area was deep in mud. The Germans saved time by waiting, and had ample time in hand when, in mid-July, they reached the Desna — nearly three-quarters of the way to Moscow — after annihilating the bulk of Russia's active forces.

Far more fatal for the Germans was their miscalculation of the reserves that Stalin could bring up from the depths of Russia. In that respect the General Staff and its Intelligence Service were as much deceived as Hitler. The fatal error is epitomized in one pregnant sentence of Halder's diary in mid-August: *"We underestimated Russia; we reckoned with 200 divisions, but now we have already identified 360."*

That largely cancelled out the wonderful success of the start. Instead of having a path swept clean of defenders, the Germans had now to deal with fresh armies that had arrived on the scene. Thanks to their own superior technique and training they eventually succeeded in destroying these armies in successive great battles of encirclement — 600,000 Russians were surrounded and captured by von Rundstedt around Kiev in September, and an equal number by von Bock on the Desna in October. Then, at last, the Germans pushed on to Moscow with a clear path — but became bogged in the autumn mud. By the time that the winter frost had hardened the ground, they again found fresh armies blocking the route, and they themselves were too exhausted to struggle on to their goal.

Next to their miscalculation of Russia's resources, the most fatal factor had been the way that Hitler and his top generals had wasted the month of August in arguing as to what should be their next move — whether they should press on towards Moscow, or switch northward to Leningrad, or southward to Kiev. Hitler wavered for weeks over the decision, and the Commander-in-Chief of the Army von Brauchitsch, was not capable of imposing a decision on Hitler. Hitler, Brauchitsch and Halder had different ideas from the start of the planning and they never properly reconciled their aims before launching the invasion or during its course. There was an amazing state of mental haziness on the topmost level of the German Command.

Lower down, Guderian in particular had a clear idea of what he wanted to do — to drive for Moscow as fast as he could, leaving the infantry armies to mop up the disorganized bodies that he had cut through. In 1940, he had won the Battle of France in that way — although, even there, Hitler and other nervous superiors had intervened to halt him outside Dunkirk, thus letting the British escape. But in 1941 he was pulled up earlier, and not allowed to go the way he wanted. After the campaign had ended in frustration, many of those who had regarded his plan as too unorthodox regretted that it had not been tried. It would have meant running big risks, but might have captured Moscow before the Russian second-line armies were ready to cover it. Far greater risks developed, and fatally, from the course that followed. USMC

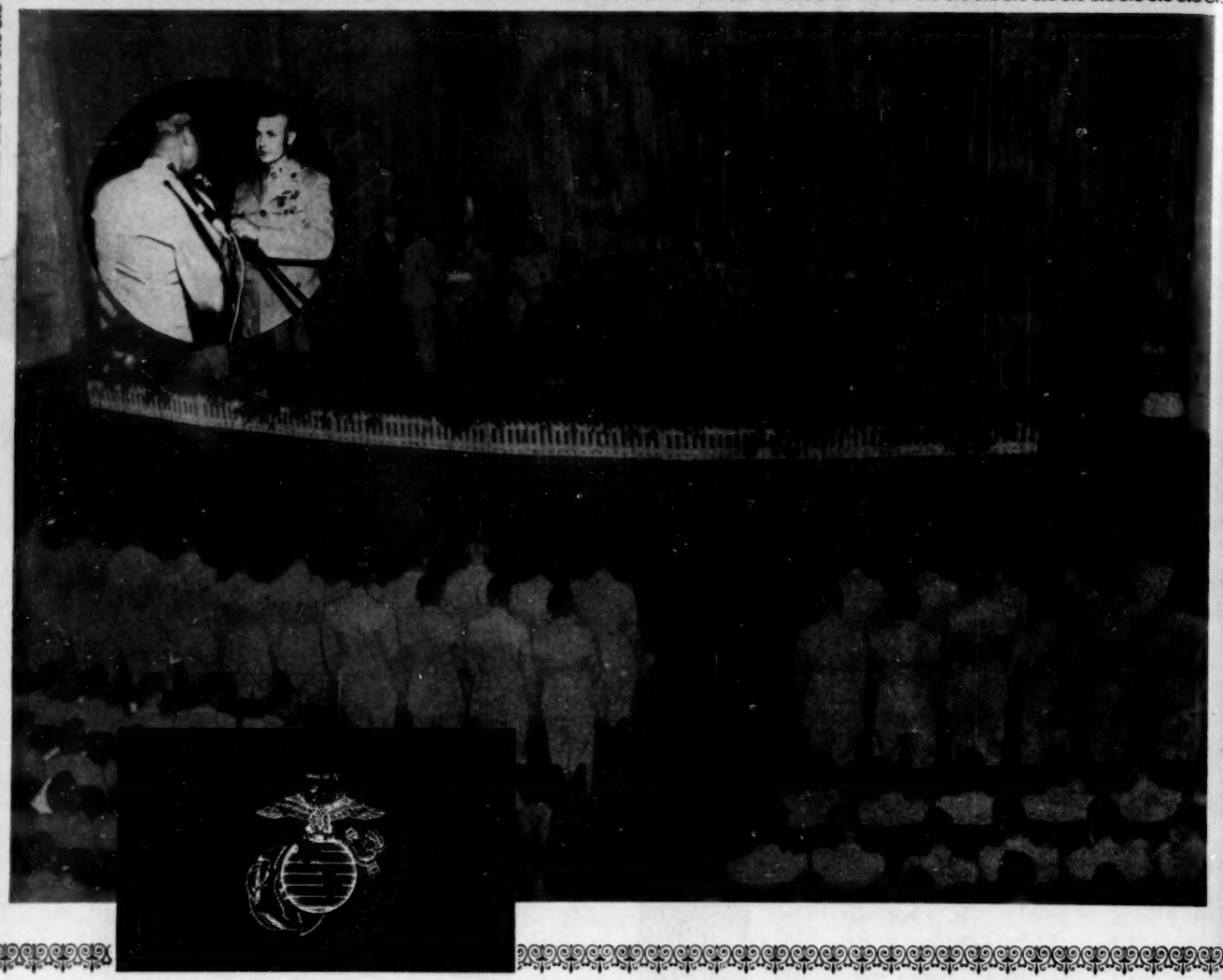
ICBM

"LIFE INSURANCE" The preservation of the peace and security of this nation depends upon two things: Our diplomatic wisdom in a troubled world, and the power to protect ourselves if peaceful negotiation should fail.

Point 2 is part of *our* responsibility. This is the Martin-U.S. Air Force TITAN program... one of the most advanced and critically important development projects in America today... an Inter-Continental Ballistic Missile conceived in peace and dedicated to the proposition that no aggressor shall ever take the life of this country.

MARTIN

BALTIMORE · DENVER



A solid core of junior officers is the base upon which effective leadership is built. Senior officers must maintain and influence this leadership through them

Sell Your Own Stock

By LtCol J. F. Donahoe, Jr.

FROM QUANTICO TO KOREA, FROM Texas to Tokyo, and from Congress to California, there's been much discussion of ways and means to encourage young men, officer and enlisted, to remain in the service. High level Pentagon "legislative task forces" are "programming" bills to this end, reenlistment bonuses have been scaled higher, a pay increase was effected 1 April 1955, Dependents' Medical Care and Survivor's Benefits have now been provided by law, but still they leave. The problem is one closely related to overall costs of government and specifically to the cost of national defense. The expense of continually training, then "losing" men to civilian life could be significantly reduced if a greater percentage would re-enlist — particularly in critical specialties — and if a larger percentage of junior officers (who are mainly from PLC, OCC and ROTC type programs) requested integration after their obligated active service. In short, we need more personnel continuity, or stability, for economic reasons, and to benefit combat efficiency by retaining a larger "hard core" of trained career personnel.

Currently, the Cordiner Committee (Defense Advisory Committee on Professional and Technical Compensation) is studying the problem. Previously, it was the Hook Committee, and, as a matter of interest, Mr. Hook is now a member of Mr. Cordiner's committee. Preliminary to their work, the American Institute of Public Opinion (the Gallup Poll), at Department of Defense instigation (and financing) sampled civilian reaction to the Armed Forces as a

career, including questions on such factors as pay and prestige. The Institute reported the military to be, in relation to other professions, a disappointing also-ran. Dr. Gallup's activity, if nothing else, "proved" a recent Navy survey wherein the reasons junior officers most frequently gave for leaving the service were lack of home life, lack of prestige and inadequacy of pay.

While Adm Carney was CNO, he (in October 1954) in an unprecedented "all hands" address to Navy officers in the Washington area, touched upon this same problem of continuity. He mentioned that the Navy junior officer — "the cutting edge of leadership" — was too often a short timer, exhibiting a short timer's attitude, and thus was no best example for the man who might be interested in re-enlisting. Though Adm Carney was primarily concerned with the Navy's problems, all services are faced with a similar problem. If our precept of "leadership by example" is valid, there is much merit in Adm Carney's view. An excellent point of departure in solving the problem of continuity would be to improve the junior officer's attitude, and by removing one of the major causes of "low shipping-over rates," lessen or eliminate the effect.

First, an honest appraisal of our *basic* problem is in order. The United States is not a nation steeped in militaristic tradition. Rather, the Declaration of Independence, our founding document, specifically referred to such abuses as:

"He [the King of Great Britain] has kept among us, in Times of Peace, Standing Armies, without the consent of our Legislature."

"He has affected to render the Military independent of and superior to the Civil Power."

"He has combined with others . . . For Quartering large Bodies of Armed Troops among us; For protecting them, by a mock trial, from Punishment for any Murders which they commit upon the Inhabitants of these States. . . ."

"He is, at this Time, transporting large Armies of foreign Mercenaries to compleat the Works of Death, Desolation and Tyranny . . . "

Judging from the abuses set forth, we could well assume that an *anti-military* tradition is almost sacred to our history. A desire for personal freedom was also expressed in that document of national freedom. In general interpretation, that desire has caused many young men to look upon military service as an infringement upon their rights. We must be realistic in our estimate of how many young men *can* be convinced that the Service is a career and not just a necessary evil of our form of government. In peacetime, it is difficult to equate the concept of "life, liberty and the pursuit of happiness" with the personal hardships (familial and sometimes financial) of a Service career. We have, at most, 3 years in which to re-orient these lifetime prejudices.

The question is — "How many young officers who would, or could, solve the equation to their own (and the Service's) satisfaction have an insight into factors which might help them reach the solution?"

This is my thesis: My contemporaries (any officer in the bracket roughly 1,000 above or below me) and I know the factors and the answers. Many of us are in daily contact with these officers or prospective officers in functioning units or in our educational system (NROTC — PLC — OCC — Basic School) and have had the opportunity to enlighten them.

That 2,000 officer bracket, in general, was eligible for separation immediately after V-J Day. The war was over, we'd won, and "When Johnny Comes Marching Home" was the national theme song! We had 2 to 4 years service — roughly what today's lieutenants have had. We had the opportunity to be separated or resign. The question was "In or Out?" and we said, "In!" Why?

Did we realize then how vital Armed Forces would be in defense of that which WW II supposedly guaranteed forever? Did we have the sense of dedication to the Marine Corps and the country that we feel we have now? And, in more basic terms, how did we determine that the pay, the prestige, and the home life that were offered us would be adequate? What satisfactions and rewards did we foresee that balanced the more material possibilities of civilian life?

The feeling exists that I was not alone in having relied heavily on the testimony of witnesses than as senior to us as we are to the "problem" group now. I would be most proud if I could say that, with great vision, I could clearly foresee the state of affairs that has made manpower needs what they are today, and, in a patriotic gesture, decided that I was needed and must stay. Today, I do feel that way. (The reader is free to remove the garnish from that highly seasoned verbiage — it *is* hard to swallow.) My decision was based more upon what I had been *told* about the Service but of which I had only the slightest personal glimpse. That, and the testimony of respected seniors who appreciated more than I did at the time that the need for a Service would continue. My own mature reasons came later.

Now, I'm a Marine Officer Instructor in the NROTC program — commonly called the "Holloway Plan" — and see some of tomorrow's second lieutenants as students or as applicants for our PLC and OCC programs. A few years ago, I was on the staff of the Basic School and there's probably poetic justice in this assignment since I must admit to looking at Basic School classes and wondering, "Who in hell thought these people could be second lieutenants?" The associations, however, have induced a comparison between beginnings, stimulated by the opportunities to open lectures with, "When I was a lieutenant . . . . "

In school (the Naval Academy) hardly a day went by but that some Naval or Marine officer departed from (or amplified) the assigned instructional topic with a vivid description (in language class) of the difficulty in arranging for quarantine inspection in a foreign port. Perhaps an engineering instructor digressed by recalling what problems his ship's engineering officer had had with the evaporators in the muddy waters of the Yangtze River. It was really a poor instructor who could not relate the subject matter to a historical example (in Naval Operations), an amusing anecdote (on good or poor fixes in Navigation) or an apocryphal tale of simple, direct action taken by John Paul Jones (in Leadership). One story in which prospective Marines took great de-

LtCol J. F. Donahoe, Jr., Marine Officer Instructor with the NROTC unit at Holy Cross College since 1954, wrote this article because in his present position he is directly influenced by "the constantly recurring 'crises' in the manpower (shortage) problems of all the Services."

Coming into the Marine Corps directly from the Naval Academy in 1942, LtCol Donahoe served as an artilleryman with the 15th Def Bn, and then the 10th Marines. After WW II, he attended the Army's Mountain Warfare School ('46-'47) before going to the Basic School for a 3-year tour. 1951 found him again with the 10th Marines, and in 1953 he joined the 11th Marines where he served as S3 and Exec of 2/11.

---

light was that when John Paul Jones uttered those famous words, "I have not yet begun to fight!" a Marine sharpshooter in the tattered rigging of the foretop exclaimed — "There's always a certain percent that never gets the word!"

By graduation day, we had absorbed not only the minimum education for degree purposes but, in addition, a sizeable amount of plain old sea-stories that lent depth and perspective to our view of the Service life. We had, by our seniors' testimony, learned that "there are only 2 good duty stations—the one you just left and the next one after this." I feel certain that the more leisurely pace of the pre-WW II PLC and Basic School allowed like contributions from instructors. It added up to professional preparation, and to "Travel, Adventure, Education!" and a way of life. I defend the proposition that such, as part of the instructional approach, was justified by the product—a good hard-charging officer corps that got the job done.

Then, too, in the period immediately preceding and during WW II there was a unit solidarity unhampered or unsullied by continual rotation (that's another subject—Rotate the Unit!) wherein the feeling of "belonging" to a highly competent, strongly spirited organization was fostered. That feeling, plus a glimpse imparted by our seniors of what a career could be, was a weighty factor that helped us say "In."

Though removed somewhat from context, I'd like to quote from *Gruntled* (April '55 GAZETTE). Col F. P. Henderson described Marine officers as a "band of brothers dedicated to keeping their Corps fit to discharge its heavy obligation to the nation." Drawing on that theme, are we enough concerned in keeping that feeling alive by establishing the "elder brother" relationship with our juniors or standing *in loco parentis* if we are senior enough? In schools and units are we doing it? Are we giving evidence (by example) of our dedication to keeping our Corps "fit to discharge its heavy obligation. . . ?" Naturally, I think so and I think we establish in the young officer a respect for the Marine Corps and its mission and pride at being a member. The tempo at which the Marine Corps operates could also make him skeptical of whether there are sufficient rewards and satisfactions to justify a career beyond his obligated service, particularly when we consider his heritage of thought and his limited personal experience. An old, overworked story seems to apply — at times the officer staying in the Corps for his obligated service likens himself to the little moron who beat his head against a stone wall because it felt so good when he quit.

We must show him what rewards and satisfactions exist. For instance, another factor in our decision to say "In"—let's admit this—was the accelerated promotions of WW II that elevated many of us rapidly to those ranks where, on Stateside duty, quarters or suitable accomodations would be available and comfortable —if not immediately, supposedly as soon as our civilian contemporaries would be able to find the same. The rigors of field duty, we could see, would usually be somewhat cushioned in accordance with RHIP. By and large that has been the case, though there have been (and still are) some disconcerting particular times when the generality did not apply. Have we set up ways through which today's lieutenants can approach us closely enough to picture these compensations in their own future.

In the field, with all of our problems of rotation, have we made them feel that they are an essential part of the command in whom we place great trust, or have they spent a good portion of their period in our unit as a vague, unrecognized "replacement" for other only vaguely recognized predecessors? Stateside, have we given them a "Welcome Aboard," or have we left them to shuttle back and forth from Fredericksburg to Quantico, from Swansboro to Camp Lejeune; or from San Clemente (Laguna, if they can afford to live there) to Camp Pendleton, perhaps occasionally tossing them a crumb in the form of a "Unit party at the Club?" From my observation, these parties are often carefully timed for the convenience of those in quarters and neglect the "time-space" factors of the lieutenants who must go home to Jacksonville, change, go for the baby sitter, return, pick up their wives and then go to the Club. They arrive only to find their seniors chatting in quiet closed groups, leaving them to talk with their fellow lieutenants from Swansboro who, plagued by the same factors, also arrived late.

This suggests a "grass roots" approach to the question of the Marine Corps as a career. We are, we hope, encouraging young officers to think about a Service career — a "way of life." In this, we compete directly with American business whose representatives annually storm the campuses in search of talent and who, in their "promise package" for post-service employment, include the green fields of untrammelled personal liberty and minimal discomfort. (Just to satisfy your curiosity, ask the lieutenant from a college class of '54, '55 or '56 what the offers have included.) These promises must be countered with a promise of our own — a promise that is best made indirectly. Despite the excellent work of "career appraisal teams" and similar sources of information, the college graduate, aged 24 or 25 and obligated service behind him, feels that he has the world for his oyster. Retirement benefits, pay raises and dependents' medical care are attractive words, but how many men of that age do they impress? And, even so, a cursory examination of today's customary offers to promising executives in the form of incentive plans, stock participation plans, retirement

plans and Blue Cross Blue Shield-type medical plans shows no great margin of difference.

Therefore, competitively, we must sell a "way of life" to these officers. We cannot be content with dull, dry-as-dust recitation of facts, figures and statistics; and by-rote presentations showing only slavish devotion to the contents of our instructional "gouges." Training or operational schedules must make sense. Our own personal motivation must show them why the subject, the training or the mission is important to the Marine Corps; why the Marine Corps is important; why the officers' role is important; and, not the least, what rewards and satisfactions we have found in the Service that should encourage them to join the "career" ranks.

The degree to which we can provide those answers is the measure of success or failure. It calls for a 2-pronged approach:

First: Clarify the mission for them. What are we teaching, doing or training for? (Not hour by hour but during the whole course or cycle.) Where does the course, training cycle or mission fit into the school curriculum and Marine Corps "big picture?"

Second: Seek the opportunity to project our feeling into school curriculum and unit functioning. Providing the young officer with the answers as to why the Marine Corps is important, and what satisfactions come from service in it is our responsibility and, save for actual combat, must bear weight co-equal with the mission in our minds. Our ability to answer is not enough. *We must seek the opportunity to answer.* Where do we find this opportunity? First must come our personal orientation.

Most of us are not the Smedley Butler type to whom young officers come running in order to sit (or stand at attention) in front of the master and glean wisdom from every word. In these fluid days, before personal mannerisms are established to the point where we are known as "Old Saddlesores" or "Hard-Hearted Horace," the Detail Branch has stepped in and our passing is noted in the cryptic orders to "FMF Pac for duty." While teacher or unit commander, however, we must know this officer group. We must determine their interests, their questions and where we can help them. Under the pressure of staying ahead in the details of a curriculum or becoming generally acquainted with a unit and maintaining its efficiency, it is easy to lose sight of their problems. Yet knowing these officers, their questions and their interests provides the opportunity to best show them the importance of the Marine Corps and our personal satisfaction in being part of it.

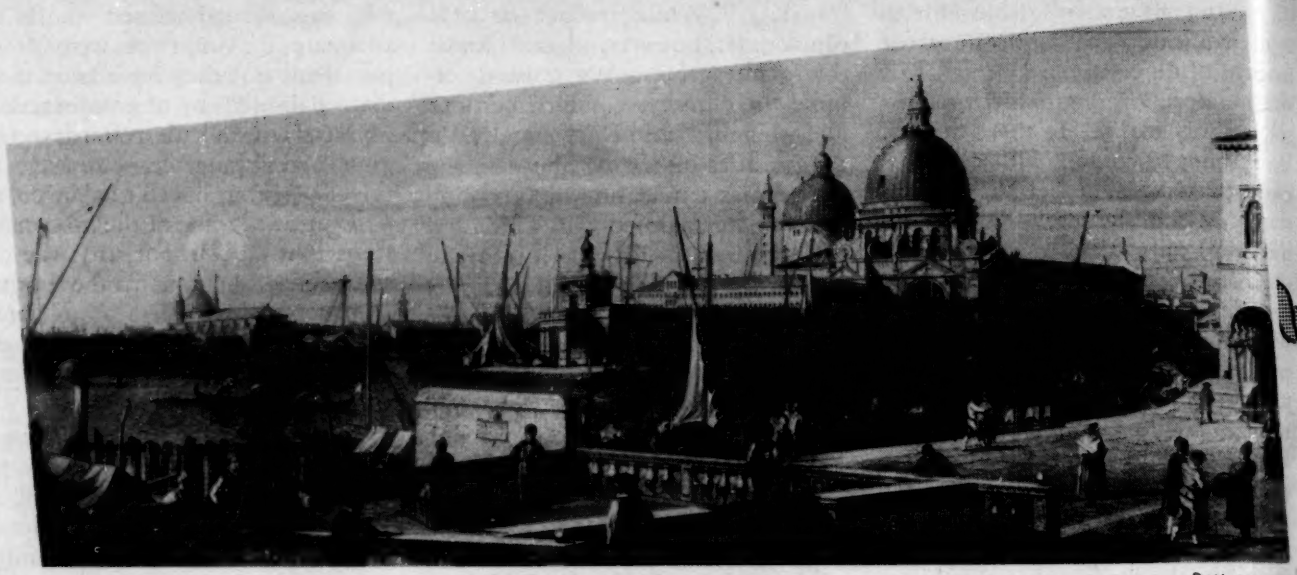
We must somehow bridge the gap between senior and junior so that each knows the other better. Have we been doing it? In the field, have we encouraged the "bull-session" type of after hours camaraderie where juniors can occasionally discuss "promotion and pay" and such in the line of a career with the "gruntled?" Stateside, where routine permits and families are with us, do we have "At Homes" or "Calling Hours?" Does the adjutant inform the newly reporting officer of the appropriate times? Or is the over-considerate "Calls are not necessary, but will be received" routine misinterpreted as indifference? This is an excellent chance to see the officer and to let him see us in another role so that he can better picture what the off-duty side of the Service is like. His father was a civilian and, for all he knows, Service wives have 2 heads and extra claws for reputation mangling. Naturally, there are times when all the budget will support is "come anytime," with an excellent chance of a "coke" and potato chips. At other times, we might expand to "Wednesdays, from 5 to 7," arranging to keep the number small enough so that the exchange of ideas is possible. Or, particularly with the married officers and their wives, after the first calls, have they been invited to dinner so that our wives can show some promise for the distaff side?

I'm certain that most of us could sum the last 10 or 15 years to the effect that, all in all, it has been a good life. We have had personal inconveniences, sudden dislocations and those moments when all the pay we'd ever earned seemed wholly inadequate for what we were doing just then; but they have been more than balanced by the satisfactions we have felt and the rewards — tangible and intangible — we have received. (If they haven't balanced, we *have* justified some of the misconceptions that exist about us!) We can show today's lieutenants these things in order to help them appreciate a "way of life." By ignoring them, we can put obstacles in his search for the answers we've found.

If we accept the necessity for a 2-pronged approach; not only the one that teaches or trains young officers to perform within the units so as to execute the mission and maintain our standards, but also the second that explains the Marine Corps, its people and its way of life, then we stand a greater chance of preparing young men for *careers.* We have accomplished the part of our task which includes "keeping the Corps fit . . . " by keeping it fit with a constant input of career officers, as willing and motivated as we were (as seen in retrospect). The first prong, is laid out by curriculum or assigned mission. The second prong, I am sure, each of us can develop by ingenuity and examination.

Not to be inferred is any suggestion that our standards be relaxed in any way. We are not engaged in a popularity contest, but we serve our standards best if we make those who meet the standards personally aware of the considerations that our experiences have shown us to be important. Then when faced with their $64,000 question of "In or Out?" their answer is based not only on limited personal experience, but is reinforced by the insight their seniors have given them.

Adm Carney laid some of the problems involved in the low "shipping-over" rate to the fact that the junior officers – again in his words – "the cutting edge of leadership" – had a poor attitude. I'd like to extend his metaphor with this thought: Today's senior officer is the honing stone upon which that cutting edge is drawn and the angle (or relationship) between blade and stone determines the edge. USMC



Bettmann

SEA POWER IN WORLD HISTORY

Dr. A. E. Sokol

THE CONCEPT OF SEA POWER comprises not only the ability to use force and wage war but also, and in fact primarily, a positive capability which confers on its possessor great political and economic benefits in both peace and war. It is thus a much more inclusive term than "naval power," with which it is often confused. For while the latter is an essential element of sea power, it is only one of several elements and must be viewed in its proper perspective to be correctly understood. Only an appreciation of the complex of sea power as a whole, its function in the life of nations, will enable us to realize its basic and permanent importance and, hence, the effort we must make to maintain it at the proper level to ensure the continued welfare of the nation. To compare seapower and airpower, for instance, merely on the basis of their efficiency as agents of destruction, as is done so often nowadays, cannot lead to fruitful policies, for that is not the right yardstick for judging their respective contribution to our national life.

What, for instance, was the relative importance of sea and air power in the Korean conflict? It is quite possible that bombs dropped from land-based airplanes did more damage to the enemy than was inflicted by naval guns or carrier planes. But that isolated face does not correctly assess their real significance. For even if we leave out of consideration the continuous and substantial economic advantages we derive from the working of sea power, the wartime role of the two powers differed in several fundamental aspects. While the effect of aerial bombing helped us to hold our own against the superior numbers of our opponents, air power was not really essential for the waging or winning of that war. It could have been fought and won without its use, though at a higher price in human lives for our side. But without sea power, the ability to transport our troops to Korea over thousands of miles of ocean, to keep them supplied and supported, to take them where they were needed most — as, for example, Inchon—we could not even have begun to fight, much less had a chance of gaining any kind of victory. It was not so much the shooting power of the Navy that was needed for that purpose, but the superior transportation facilities offered by our control of the sea. Air power was a great additional asset to us, especially as the other side had little of it; but sea power was a basic condition without which we could not have crossed the ocean and would have remained completely powerless to carry out our national policy in distant Korea with which we have no land connection.

It is the fact that land constitutes only the minor part of our earth, and that it is cut up into many separate units with water the connecting link between them, which gives sea power its real meaning. To be sure, man being a "land animal," solid land represents the basic element of human existence. It offers him not only a place to live and to move about, but also the best opportunity to grow and gather food, find shelter, produce implements and weapons, and obtain most of the materials which support life and civilization. Man can live—and has lived —quite comfortably on land alone. The significance of the sea as the second element of the human habitat is much more limited and consists chiefly in offering another medium of locomotion. But once a people begins to use the sea for purposes of movement and transportation, it quickly gains such advantages that it takes supremacy over

land-bound nations. This sea-born ability to extend its reach, to obtain additional supplies from the inexhaustible storehouse of the world beyond its own shores, may easily make up for deficiencies of its own homeland, such as lack of space, productivity or resources, or even for shortages of manpower. For, in addition to the economic benefits which the use of sea lanes bestows on a nation, it also offers decided military advantages, multiplying the effectiveness of armed forces by giving them a special mobility which enables them to be shifted quickly to the place where they are needed.

Much of this also holds true of air power, such as the ability to use the air spaces for the transportation of men, goods and weapons. Since air envelops the entire globe, locomotion by air is even less restricted than that by sea and thus offers some additional advantages. But except in a few special cases, air transport represents a welcome supplementary facility rather than a basically new and indispensable one. Almost any place on earth can be reached by land and sea, so that all vital transportation needs can be served by a combination of the two modes of locomotion. Only few regions are inaccessible except by air, and they are among the least important parts of the earth. Moreover, the use of air transportation is limited by its excessive expense, which rules it out as a means of moving bulky commodities in heavy demand. Its best field of application is in carrying people (except in large numbers), light-weight goods of high value and destructive weapons. This ability may be of the greatest importance in time of war, but it is nevertheless a very restricted one, and cannot be considered an adequate substitute for the many-sided capabilities of land and sea power.

Because of the benefits derived from the control of the sea lanes even small seafaring nations could become great powers in their times, such as the Phoenicians, the Greek states—mere cities with a negligible and infertile hinterland — Venice, Portugal or the Netherlands. The sea and the contact with other lands not only made these nations so rich and powerful that they were able to hold their own in competition with spacious and populous land powers, but also made them centers of an advanced civilization, which combined the cultural gifts of many regions into a brilliant unity and which, in turn, by the aid of the sea, spread to the far corners of the earth. Thus, the sea and the power it confers on the receptive nation also became the inspirer and promoter of human progress, of the arts and learning and, especially, of a spirit of freedom and independence usually far ahead of contemporary land-bound states.

But, by deriving such a large part of their affluence from the sea, these maritime nations come to depend on it so much that they cannot prosper without the unhindered enjoyment of its privileges. Often a substantial portion of their food supply must come to them from across the sea, and their people must starve if its flow were interrupted; raw materials and merchandise to keep their industries or their trade alive must be carried to them or to their customers by ships, and their economic structure would collapse if these failed to arrive. Their seaborne traffic as well as their coasts, the very riches accumulated in their ports through maritime commerce, piracy or raiding, will become the object of envy of neighbors and competitors. Unless they are prepared to defend themselves and their vital interests along the highways of the sea, they soon find themselves in great difficulties and will perish.

Professor of Asiatic and Slavic Studies at Stanford University, **Dr. A. E. Sokol** was born in Vienna, Austria. He served as a lieutenant in the Austro-Hungarian Navy during WW I. In 1927 he came to the US for graduate work. During WW II he served as Assistant Director, Far Eastern Army Specialized Training Program. As an associate at the Hoover Institute, Dr. Sokol conducts seminars on national security and sea power to graduate students. He is currently in Vienna, under a Fulbright Grant, lecturing and teaching on international relations.

Map #1 — Main lines of world commerce before 1500 AD: ——— sea lanes, ... land routes

Among the countries most vulnerable to attacks on their sea communications are, of course, the relatively small and overpopulated insular and industrial states, such as Great Britain or Japan. The least sensitive to maritime pressures are, on the other hand, the large land masses which produce almost everything they need within their own territory or adjacent regions, and thus are less dependent on the sea. Most of the countries of the world are situated somewhere between the two extremes, but under modern conditions every part of the world must obtain a substantial portion of its needs from across the ocean, and every littoral is in some way exposed to naval attack. In fact, because of the ever-increasing dependence of industry on the exchange of goods for food and raw materials, and because of the greatly increased ability of fleets to reach out over the land, the role of sea power is becoming more important than ever before, and there is every indication that this situation will prevail for a long time.

The United States is a good example of this fact. Although ours is counted among the wealthiest parts of the world, there are at least 70 strategic materials which are in short supply within our own borders, but are yet absolutely essential to the maintenance of our way of life, in war as well as in peace. Having only 2 neighbors with a common land border with us, we can reach the great majority of other countries—or sources of the required supplies—even those situated on our own continent, only by sea or by air. Whether it is for the purposes of trade, or to bring pressure to bear on an opponent, we must cross the ocean. Under present conditions that means that at least 98 percent of the required freight traffic must be carried by ships, and that even purely military measures cannot succeed unless they are properly supported by sea power.

In order to protect their vital interests at sea and along their coasts, at an early date the maritime nations had to develop navies, organizations of ships, men and weapons, equipped and trained to fight at sea, to keep an attacker away from his goals and to carry out a nation's basic policies wherever it seemed necessary and feasible. While individual ships and their weapons, size and composition of naval fleets have been changing through the ages in accordance with the development of technology, their purposes and aims have remained fundamentally the same—to maintain the nation's sea power and strike at that of the opponent.

To illustrate the economic and military role of sea power in the determination of a nation's fate and place in the world, we need only follow the development of the maritime countries of Europe. Before the year 1500, the beginning of the "Age of Maritime Discovery," which opened new communication lines across the oceans, the main lines of world commerce ran from the Orient, either over the slow and cumbersome caravan routes across the Asian land mass, or the easier waterways by the Indian Ocean and the Red Sea, to converge on the Near East, Egypt, Syria or Constantinople. There the trade goods were taken up by ships, mostly Venetian, Genoese or French (Marseilles), and carried to their respective home ports on the European shores of the Mediterranean. From these points they were distributed by land to the various countries of the continent, following the natural lines of communication, across the Alpine passes and along river valleys. One important route, for instance, began in Venice ("Queen of the Sea"), led across the Brenner Pass in the Tyrol, along the Inn River to the Rhine, the Danube or the Elbe. When the trade goods reached the North Sea or Baltic, they were again loaded on ships, mostly those of the Hanseatic League of German cities, such as Hamburg, Luebeck, Bremen or Cologne, and shipped to England, the Scandinavian countries, or Russia and Poland. Because of the limited seaworthiness of ships built for the comparatively calm Mediterranean, only a small portion of the trade went directly by sea from the Near East to the Atlantic Coast. (See map)

Protected by their navies, which enabled them to balance the power of such land giants as the Turkish Empire or the growing strength of

Muscovy, the Mediterranean sea ports and the Hanseatic towns, as well as the Italian, French, Austrian, Swiss and German cities situated along the main lines of traffic, prospered and became leaders of European political and cultural life. They are of the Renaissance, the great cathedrals and palaces, the paintings of Leonardo da Vinci, Raphael, Michelangelo, Duerer, and Holbein are striking testimonials to the economic and cultural well-being of these cities and peoples. At the same time England, for instance, unfavorably located in relation to the vital sea lanes of that period, was a comparatively poor and inconsequential country, even though its people were just as vigorous, enterprising and brave, as they later showed.

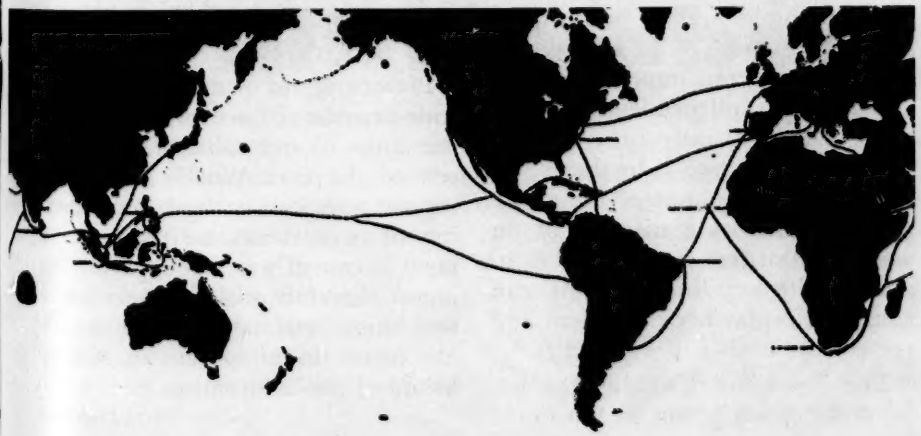
But with the development of the direct sea route to the Indies and the Far East around Africa, and the discovery of whole new worlds across the Atlantic—that is, of new sources of desirable goods, profitable trade, and colonial exploitation—the situation quickly changed. After 1500 it was the countries bordering the Atlantic which gradually took the leading role, because they were better situated with regard to the new main lanes of maritime commerce. (Map 2) First Portugal and Spain ventured out along the oceanic highways, captured trade and territory in the newly opened regions, enriched themselves by the flow of gold from there, and grew so powerful that they could divide the world between themselves. It was Charles V, Holy Roman Emperor and King of Spain, of whom it was first said that in his realm the sun never set. But Spain and Portugal were soon followed by Holland, France and England, who enjoyed similar advantages relative to the Atlantic sea lanes.

At the same time the commerce of the Mediterranean and the European continent, the life lines of Italy and Germany, began to dry up. Neither land transport across Asia nor the primitive sea traffic of the Oriental peoples could stand up against the competition of the much more efficient Atlantic ships. Avoiding frequent and expensive transshipments, keeping away pirates and rivals by their superior weapons and better seamanship, these oceanic vessels soon put all other carriers of world trade out of business. The Italian and German cities which before had profited by that trade, now, far from the lucrative seaways, began to decline, until they in turn found themselves in a sort of economic, political and cultural backwater. What had caused their atrophy was not so much a loss of national vigor, a naval or military defeat, or any particular technological innovaton, but a change in their geographic relation to the rest of the world, which is one of the principal elements of sea power. In the meantime the Atlantic countries forged ahead, strengthened themselves internally as well as externally, and became leaders of Western political life and civilization. Not until the 19th Century did Italy and Germany achieve national unity or regain some of their former position as great powers.

Not all of the Atlantic states, however, fully maintained or developed the privileges offered them by their geographic location. Spain and Portugal, though greatly superior to the inhabitants of the newly discovered lands at sea and on land, proved to be no match for the seamanship and fighting prowess of the North European nations, especially Holland and England. Their comparative naval weakness first became evident in the defeat of the great and "invincible" Spanish Armada in 1588, at the hand of the small but well-handled English ships, aided by the formidable weather conditions of northern waters. Moreover, Spain and France, intimately and continuously involved in inter-European conflicts, had to divide their energies between their continental and their maritime world interests, thus weakening their position at sea. Nor did they ever take to the sea as readily and almost naturally as did the Dutch or the English. But although in this respect these two nations closely resembled each other, Holland lacked the manpower and resources of the British Isles and did not enjoy the protection of a surrounding sea.

Consequently England and the other parts of what is now known as Great Britain gradually emerged as the leading maritime, naval and colonial nation of Europe, which at that time meant of the world. The foresight of British statesmen, the unceasing work of innumerable merchants and their ships, the splendid fighting qualities of British soldiers and sailors, and the tenacity and idealism of British colonizers, not only gained for England a net of strongpoints and bases around the world, control over vast new lands for her growing population, unlimited sources of all kinds of products and materials, a lucrative trade reaching to the farthest corners of the globe, but also a political influence unrivaled at that time. In numerous wars in which British naval superiority won splendid victories at comparatively little cost to Great Britain, one competitor after another was eliminated or reduced to a secondary position as a sea power. In the battles of the Nile and of Trafalgar, Adm Nelson put the finishing touches to the British dominion over the oceans—and many of the lands adjoining them—which assured Great Britain's safety from invasion and her leading position in the world. Not until World War I was this position seriously challenged, and even then British sea

Map #2 — Main lines of world commerce after 1500 AD



power, though bleeding from many deep wounds, caused the eventual downfall of the new rival, Germany.

But that struggle also clearly brought out the inherent vulnerability of the British Isles to the working of sea power. Consisting of relatively small patches of land, unable to produce sufficient food for their large population, or the necessary raw materials for their vital industries, they must have access to the ocean, and thereby to the resources of the rest of the world. Without it they could not continue to play their important role in world affairs, maintain their connection with the rest of the far-flung British Commonwealth, or even assure a bare existence for themselves. A successful attack on British sea power which would result in the interruption of maritime traffic for any length of time would bring the country quickly from power to ruin.

To be sure, the modern development of land transportation and the advent of air power have had a profound influence on this situation and will probably continue to do so in the future. On the whole, these changes are at present working to the disadvantage of Great Britain. No longer is that country safe from invasion or direct assault on its territory, because airplanes are not stopped by water as are land forces; no longer can British ships alone guarantee the stream of essential exchange, nor can they be sure of reaching distant shores before the slow-moving land forces of an opponent can arrive there. Today also, Great Britain is forced to spread her expenditures for defense over land, sea and air forces instead of concentrating on the naval establishment as before. No longer able to maintain the largest navy in the world, she cannot continue in "splendid isolation," safe from attack on her home land or her empire.

But these undeniable indications of a weakening in the power position of Great Britain are no more proof of the decline of sea power itself than were the progressive paralysis of Italy and Germany at an earlier date. Changing world conditions naturally affect countries constantly, leading to the rise of one and the deterioration of another; circumstances which yesterday were the root of power may turn into the cause of decay, and vice versa. Without subscribing to any sort of material determinism, we must still realize that the kaleidoscopic variation of our environment favors now one, and another, of the actors upon the world stage.

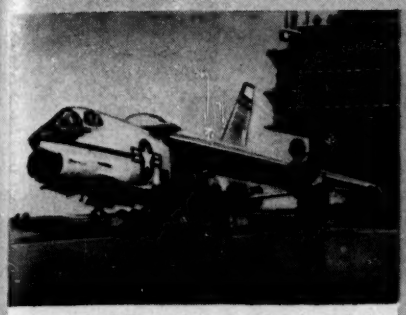
It was sea power, in combination with an advantageous geographic location, a certain amount of technological superiority and national virility which carried Great Britain to the strong position which she enjoyed for a long time. Being alert to the possibilities it offered, Britain took advantage of the expansion of the known world which occurred at that time. But today we witness the opposite tendency, that is, a shrinking of our world, of distances and spacial relationships. On the whole, the process favors the larger countries, whose vast land mass and industrial capacity is a more solid basis of power than that of the city states of old or the comparatively small countries of Western Europe, and which are protected by a much broader girdle of water than the English Channel or an inland sea. The country which today best fulfills these conditions is the United States, and hence we see this nation gradually taking over the role formerly played by Great Britain. But even the largest and most powerful country cannot, under present conditions, prosper and feel safe entirely on its own, without the additional resources and support offered by others. Only as a member of a world-wide alliance of like-minded countries can we hope to survive and preserve our hard-won freedom in a world threatened by aggression and the weapons of mass destruction. This trend toward the formation of larger political, economic and military units among the nations of the Free World does not, however, imperil the individuality or independence of the participants. It only furnishes the means of preserving it by sharing in the wealth and power of the entire group. Thus, as a member of an association of free states, Great Britain, despite her limited lands, can continue to play her prominent and respectable role in world affairs.

But instead of lessening the importance of sea power in the world of today, the defensive alliance of free countries only increases the need for it still further. Being scattered over the entire globe, they are kept together, connected and integrated not only by the mutuality of their interests, but also by a common medium of intercourse—the sea. To supplement their own restricted resources from the vase storehouse of the world and to obtain aid in times of crisis, ships and all the other elements of sea power are indispensable. To believe that airplanes or guided missiles can take over all the vital functions of sea power is unrealistic and dangerous. The development of new weapons and means of fighting, increasing the striking power of the Navy more than its vulnerability, only makes its task more difficult and complex, but certainly not less essential.

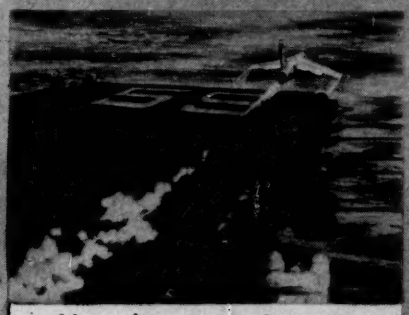
Besides being the connecting link in the world-wide alliance of which the United States finds itself the leader and backbone, the sea and the control of its highways remains our best guarantee of the Free World's superiority and final victory over an essentially land-bound opponent. For without it the economic and industrial advantages which we still have could not be utilized to balance the other side's preponderance in manpower, land communications and interior lines. By establishing, maintaining and—if need be—using a chain of bases surrounding the Eurasian "Heartland," we can make up for deficiencies in other respects, to prevent aggression or make it impossible for it to succeed. But such bases, whether fixed or movable, can only be created and supported by sea power. Hence, while on land and in the air we may be no more than a match for our prospective opponents, it is on the sea where our principal strength lies.

Protecting our own country by the wide expanse of 2 oceans, connecting the links of our alliance with the rest of the Free World, safeguarding our economic strength, and offering us exceptional military advantages in case of war, our superior sea power therefore still constitutes our best shield and weapon, the deciding factor in an otherwise closely balanced power situation.

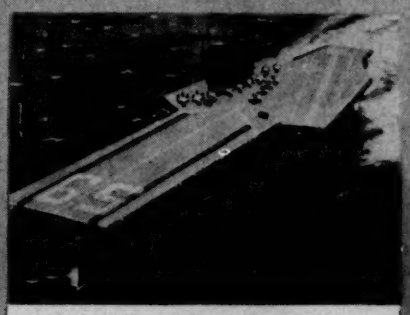
USMC



Catapult Officer gives the signal, and the Vought F8U-1 *Crusader* is hurtled along the deck by the Forrestal's steam catapult...



...airborne in a matter of seconds, the *Crusader* streaks skyward at a speed never before attained by a Navy jet fighter...



...while below, the mighty Forrestal's size and speed dramatize the devastating long-range striking power of the New Air Navy.

1000 + mph *Crusader* qualifies aboard ship!

SPECIAL: WITH THE USS FORRESTAL AT SEA. Aviation history was made aboard this new attack carrier when the flashing Chance Vought F8U-1 *Crusader* successfully completed its shipboard qualification trials.

The trials, held off the Atlantic Coast, marked the first time that an aircraft capable of level flight speeds in excess of 1,000 miles an hour had ever operated from a carrier deck.

Designed and built by Chance Vought, the *Crusader* met all of the Navy's stringent shipboard operating requirements like a champion. This blazing new air superiority fighter soon will be assigned to active duty with the Fleet, adding 1,000 miles-an-hour-plus performance to the growing strength of America's Defense Team.

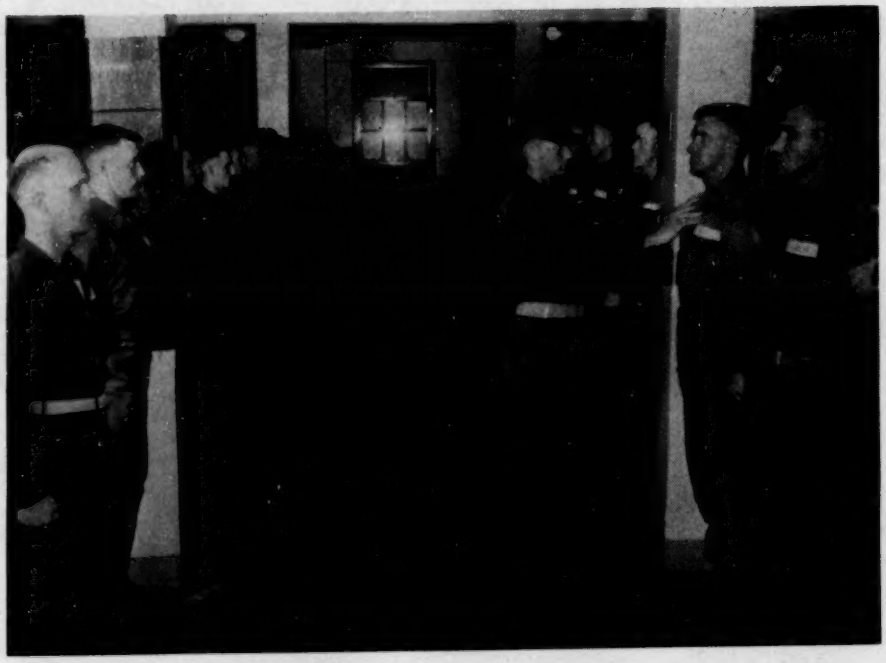
Naval Aviators Challenge the Jet Frontier. Write NAVCAD, Washington 25, D.C., or visit your nearest Naval Air Station for the New Navy story.

CHANCE VOUGHT AIRCRAFT
INCORPORATED · DALLAS, TEXAS

DESIGNER AND BUILDER OF HIGH PERFORMANCE MILITARY AIRCRAFT SINCE 1917

T&T

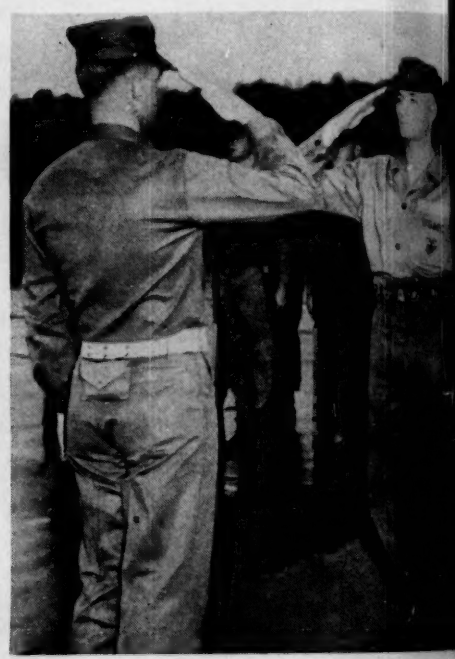
Arrival at Quantico.



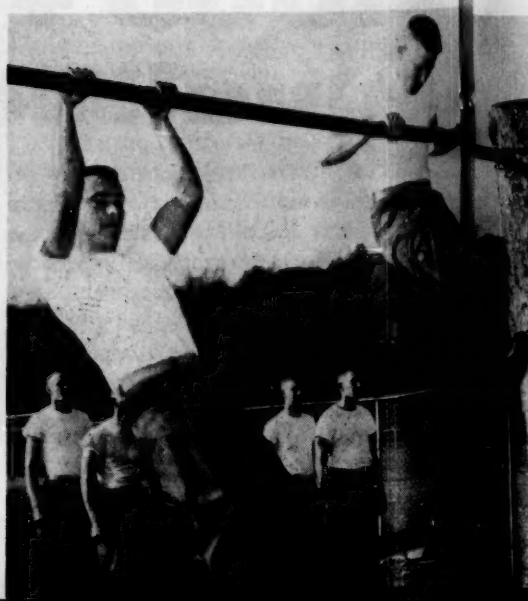
NCO inspecting in the barracks

Fire team in field training.

All aspirants to commissions in the Marine Corps except graduates of the Naval Academy are trained and screened as enlisted men at the Training and Tes Regiment, Marine Corps Schools, Quantico, Virginia. They receive a 12-week course of tough, vigorous and demanding training which commences the moment they are met at the train by selected noncommissioned officers. It ends when they march proudly down the aisle to receive their commissions at the graduating ceremony. The training is fundamental and stresses spit and polish, discipline, leadership and physical conditioning in the best traditions of Boot Camp. The attrition, not counting physi-



Close Order Drill — Platoon unde

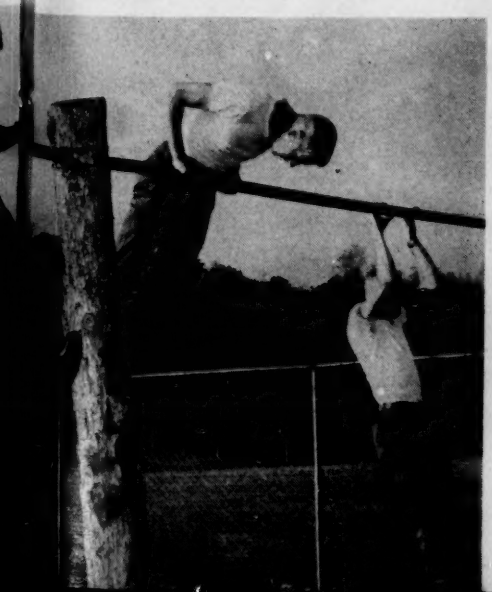


REGT

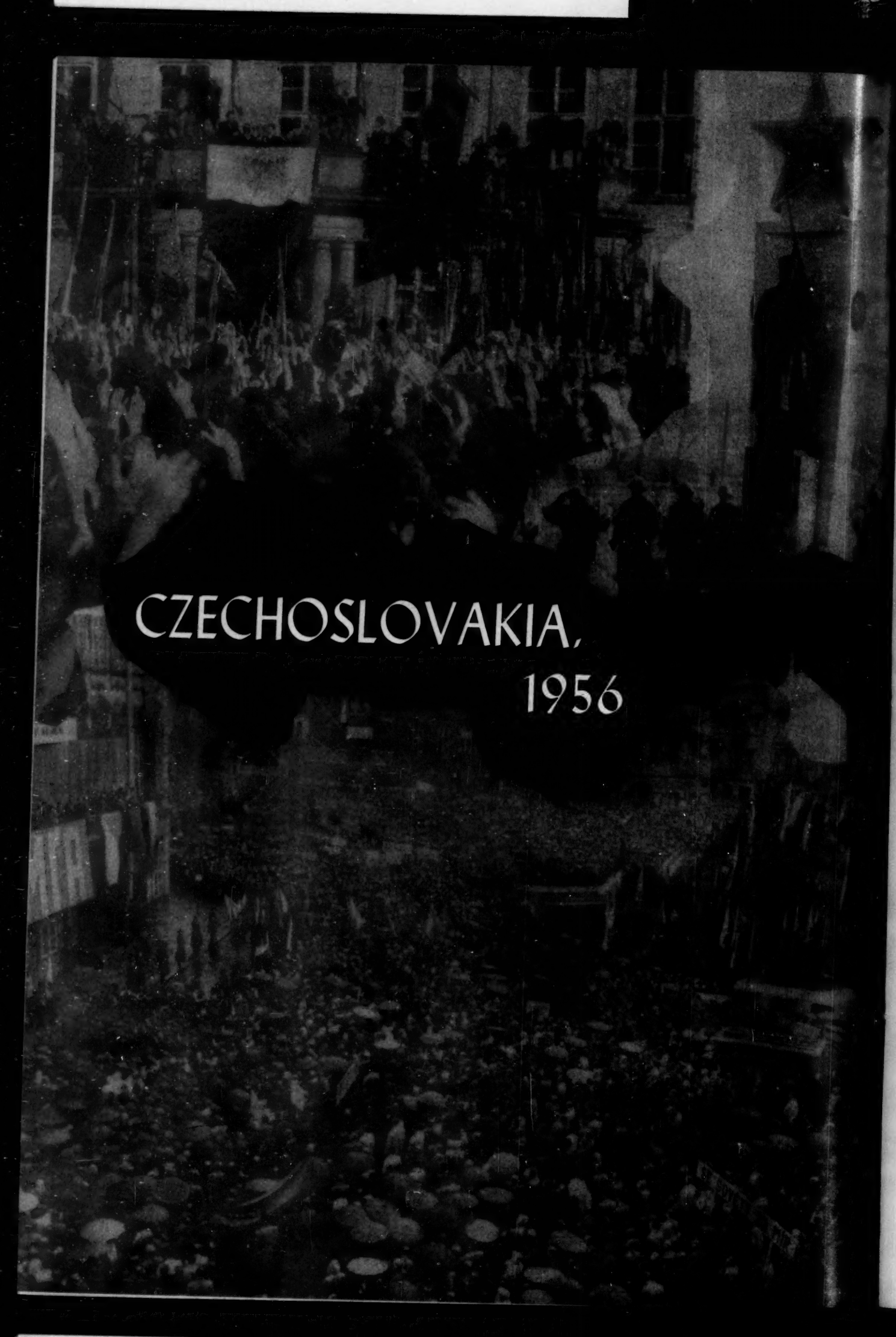
cal rejects, averages from 10 to 15 percent. Training is by platoon, with an officer platoon leader and 2 NCOs taking the same platoon through the entire course. Physical conditioning has been stepped up to meet the increased demands for physical endurance in fast-moving modern warfare, as well as to compensate for the debilitating effects of softer living conditions in civilian life. Whether PLCs, NROTCs or OCs, the courses are the same, the treatment the same, and the results the same for those who pass—emotional stability, discipline, esprit de corps, and a thorough capability in the fundamentals that make a good, basic Marine!

Circle throw-out.

mmand of a student acting sergeant.



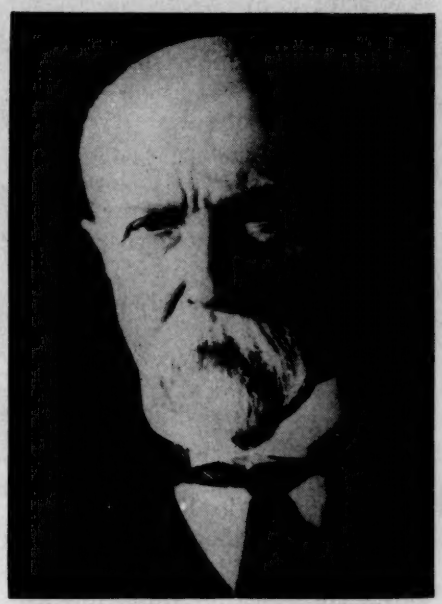
End result


CZECHOSLOVAKIA,
1956

By Wing Commander J. Gellner, RCAF

IN THE SEPTEMBER 1950 ISSUE OF the GAZETTE, in an article entitled *A Soviet Satellite,* this writer tried to paint a picture of life in Communist Czechoslovakia as it was at the beginning of 1950. At that time, the Communists had been in power for approximately 2 years. They had taken over a country with a democratic tradition, inhabited by strongly individualistic, freedom-loving people; a country which had developed in the orbit of Western European culture; a country with Western standards of living and Western modes of life. All this was against them. There were, however, also a number of circumstances peculiar to the country, the people, and the times which the new masters could have exploited to their advantage. First and most important of these intangible assets of the Communist regime was the widespread fear of, and hatred for, the Germans. The people had little confidence that the Western powers would protect them against another German aggression any better than they had protected Czechoslovakia in 1938 and 1939. On the other hand, even though there was little respect for the unruly Russian soldiery which for a short time had occupied Czechoslovakia, the prestige of Soviet arms was high and the belief widespread that the USSR was ever ready to keep the Germans in check. No less important was the fact that the era of German occupation and of the puppet regimes in Prague and Bratislava had left the Czechs and Slovaks morally weakened. Too many of them had grown disillusioned, even cynical and utterly materialistic, with peace and quiet and the enjoyment of the good things their aim in life. Religious feelings had become flat and formalized. There was a sad lack of strong, democratic leadership. In fact, the Communist revolution had come at the point of beginning a disintegration of society — a disintegration by no means as universal as that which brought the Soviets to power in 1917 on the ruins of Tsarism, but still one which, without having touched the solid kernel of the nation, had already rotted some of the circumference of its political and social institutions. Finally, the Second Republic had evoked little enthusiasm in its citizens who, moreover, generally were not opposed to economic socialism, although the majority rejected the Marxist ideology and the Marxist concept of the organization of the state. By and large, there was a reservoir of good will from which the Communist leaders could have drawn if they had known how to go about it — or if Moscow had allowed them to administer Czechoslovakia in their own way. As it was, that reservoir of good will ran dry in the first year after the Communist "coup" of February 1948. The crude, oppressive methods of the government, its abject subservience to Moscow, the declining standard of living, all combined to make Communism loathed in Czechoslovakia. The attitude of the people toward Communism has not changed in these last 6 years, but something else has: after years of passive, sullen acceptance of the Communist yoke, there are now signs of a developing active opposition which is the sign of a national regeneration of the Czechs and Slovaks.

Wide World



Thomas Masaryk

An End to Shwejkism

Jaroslav Hasek, the genial creator of the *Good Soldier Shwejk,* did his nation a disservice. It had been his intention to let his countrymen look into a mirror and see their less attractive characteristics. In particular, Hasek wanted to show up the deep-rooted Czech urge for survival, even at the price of sacrificing basic ethical values. Unfortunately, as he drew the picture of Shwejk, the crafty soldier who managed to go through the First World War with the utmost good cheer and a minimum of risk and exertion simply by playing dumb, Hasek grew fond of his creation and made him all too sympathetic. As a consequence, Shwejk became to the Czechs something akin to the earthy personality of Samuel Weller of the *Pickwick Papers.* The "shwejkovina" became the philosophy of resistance against evil: bend but do not break, lie and cheat provided you fool your masters and perpetuate your own existence. The upsurge of national feeling and the spirit of sacrifice of 1938 were a conscious abandonment of shwejkism and a return to the traditions of the Czechs' heroic past. Then came the Munich debacle. It was taken as a proof that there was no point for a small nation to live like a lion and that Shwejkism was the best policy after all. There was some resistance to the German occupation (and some individuals laid down their lives with the utmost heroism), but it was neither widespread nor really effective. At the same time, Czechoslovakia managed to emerge from the war without too much destruction and without too bad a blood-letting. With equal docility, the nation submitted to the well-staged and long-prepared Communist "coup" of 1948.

It must be said here that Hasek did not write his book for the Slovaks, that Shwejk never became a popular hero in Slovakia, and that shwejkism was never consciously accepted there. The Slovak uprising of August 1944 (in which, incidentally, many Czechs took an active part) was as gallant an effort as any staged against the Germans in the occupied countries during WWII.

The spread of Shwejkism coincided, or perhaps was a product of, a crisis in Czechoslovakian political leadership. The great old man of Czechoslovakia, Thomas Masaryk, retired in 1935, dead by 1937, proved to be irreplaceable. His helpers in creating Czechoslovakia had grown old, yet held on stubbornly to their almost complete dominance of the political life of the country. They had been fighters during WWI, but after having been showered for two decades

with honors and often exaggerated praise, most of them had become self-centered and self-satisfied, overly cautious and physically and morally flabby. Dr. Benes himself was a man of the highest intellectual standing and of extraordinary ability, but his cold, Gallic logic deprived him of political intuition and of that sense of history which made a Churchill great. He also thoroughly abhorred violence, preferring the worst political compromise to a clear-cut clash of principles. He had enveloped himself with such an aura of political infallibility that the nation was well satisfied to let him find a way out of the successive crises in which it found itself. Benes, although he certainly meant well, failed both in 1938 and 1948. The standard excuse for the latter failure — that he was by then a very sick man — is spurious. If he was physically and mentally not up to a job of desperate difficulty, he should not have held on to it. Indeed, as he quite obviously was already very sick in 1946, he should not have accepted his re-election to the presidency at that time. The fact remains that the nation was well ahead of its leaders in 1938, and that it had no capable, democratic leadership when another moment of fateful decision came 10 years later.

During the first 5 years of Communist domination of Czechoslovakia it seemed as if the Czechs and Slovaks had again found a way of living with their oppressor without really cooperating with them — and of outliving them in the end, if all went well. The first signs of a straightening of the spines and of beginning active resistance came in 1953: there was a strike, and in some places a revolt, of industrial workers in June of that year. That the reasons were purely economic—a currency reform that practically robbed the people of all their savings, and the end of food rationing which sharply increased the cost of the basic necessities of life and thus even further lowered the general standard of living — should not detract from the brave show put up by the Czech workingman. After all, the motives behind the rising in East Germany that took place at about the same time, were also material—and, in fact, practically identical with those which prompted the workers' protest in Czechoslovakia. And, even more important, the workers had in the past years accepted sullenly, but docilely, similar oppressive measures without raising their voices and fists against their masters; in 1953, for the first time, they stood up against oppression. It is difficult to assess how widespread the revolt was in Czechoslovakia, and how much blood was spilled in its suppression. The German rising of 17 June 1953 could be observed from West Berlin; the more recent in Poznan was timed so that it would unfold in full view of the many foreigners who just then attended the city's trade fair. Czechoslovakia, on the other hand, was almost hermetically closed to the West in 1953, and there were no foreign observers in Plzen (the storm center of the revolt) when the workers rushed into the streets. From reports of escapees, and from the cries of anguish of the Czechoslovak Communist leaders and press it can be deduced that this was not an isolated event, but a large-scale movement which the authorities had considerable difficulties in subduing. The most lasting effect of the uprising was that the people learned that resistance does pay — provided, of course, the price is paid in dead and imprisoned. Just as in East Germany after the rising, in the Vorkuta slave labor camps after the big strike, in Poznan after this year's revolt, also in Czechoslovakia the resisters succeeded in extracting by force economic advantages that the Communist authorities had refused to grant without coercion. The lesson has been learned in Czechoslovakia that even a dictatorial regime is not omnipotent, and that the Czechoslovak in particular is not even sure of its ability to control the country by sheer force.

It is particularly encouraging that the Czechoslovak youth does not seem to have succumbed to 8 years of Communist propaganda. The effects of systematic Communist education upon the young have been overestimated by many people — the present writer was one of them. It is pleasant to have been proven wrong. From the demands freely voiced this spring and summer by the Czech academic youth in their societies and in the streets it is quite apparent that the innate love of personal freedom and rejection of all forms of regimentation, the age-old quest for clarity and truth, and the fresh idealism of the young people are natural forces that are too strong to be subdued by the dreary drum-beat of Communist propaganda. The youth was successfully corrupted in Nazi Germany and to a large degree in the Soviet Union because the emphasis of government propaganda there was on nationalism; the crawling adulation for everything Russian that accompanied the propagation of a foreign ideology nullified all efforts of the Czechoslovak government to capture the souls of the young. It is significant that the draft resolutions voted by university committees of the Czechoslovak Youth Union demanded more personal liberty and a freer cultural life, but stressed also the need for national dignity. One of these resolutions called the jamming of foreign boardcasts, "beneath the dignity of the state," and recommended as the best answer to propaganda from abroad, "the publication of regular, timely, and full information about events in the country and in the rest of the world." It also turned against the use of the slogan, "The Soviet Union our model," the most cherished of all those which Czechoslovak propaganda blares into the ears of the people day and night, in all phases of life, "even in those in which we ourselves were and are models for the Soviet Union."

Wing Commander J. Gellner, RCAF, was born in Trieste (then in the Austro-Hungarian Empire) in 1907. His father was an officer in the Austro-Hungarian Army, then later in the Czech Army. After being graduated from the University of Brno with a doctor of laws degree in 1930, he practiced law in Czechoslovakia until the German occupation when he came to the US. In 1940 he went to Canada where he joined the RCAF. During WWII he served overseas in heavy bombers. Now at the RCAF Staff College in Toronto, his interests lie in the study of history and he does some lecturing on international affairs. Cdr Gellner has written several articles for the Gazette on European problems during the last few years.

Wide World

The farmers' resistence to collectivization has been persistent

The whole series of students' demonstrations, in which the participants poked fun at the Communist leaders, government institutions, and at the student meetings and resolutions that followed, show a healthy awakening of confidence and national pride. The Czechoslovak Communist leadership is quite obviously worried. That in its reactions it could do no better than to forbid and to threaten demonstrates how intrinsically weak it is. It is perhaps too early to judge, but there are definite indications that the Czechs are emerging from the lethargy of Shwejkism, and that new democratic leaders are coming to the fore to replace the tired and too often defeated leaders of the old generation.

The People and Communism

There are an estimated million-and-three-quarter Communist Party card holders in Czechoslovakia. This is a full 13 percent of the nation, the highest percentage of Communist party members in any country (as a comparison, the equivalent figure in Russia is less than 4 percent). Quantitatively the Czechoslovak Communist Party thus stacks up very well, indeed, but qualitatively it is among the worst, that is, among the ideologically weakest, of the Communist parties of the world. Most of its members joined for reasons of material advancement and do not give a fig for Marx-Leninism. Indeed, in its composition the Czechoslovak Communist Party is somewhat similar to the defunct Nazi party in Germany which also contained a majority of members who had to join or found it profitable to join, but its hard core of party zealots is much smaller in proportion to the total membership than was the case in the Nazi movement. Attempts to put some fervor into the Communist rank and file have been quite unsuccessful. Even the graduates of the elite Year of Party Schooling seem to come out of this Marxist university unconvinced. For years now the Party organs have fulminated against 4 common heresies: bourgeois nationalism, which militates against the ready acceptance of everything Russian; social democratism, which holds the obsolete and preposterous notion that the Communist Party should advance the interests of the workers; religious obscurantism, which makes a man remain devoted to his faith although he joined the Communist Party and now sports the hammer and sickle in his button hole; and Masarykism, which is the conviction that the bourgeois First Republic was the workers' paradise rather than the present People's Democratic Republic of Czechoslovakia. The results have been nil. The Soviet regime is detested; Czech and Slovak nationalism is growing stronger; the people are getting stauncher in their religious convictions, and more sentimentally fond of "the good old days."

Most people in Czechoslovakia reject Communism, but even socialism, toward which especially the Czechs used to have a definite leaning, has lost some ground, mainly because it has not been successful in the economic field. No amount of government assurances that the low living standard is a sacrifice that must be bought for the sake of a bright future in a brave new world can conceal the fact that public ownership and scientific economic planning have made the average citizen poorer than he was under capitalism and poorer than the average citizen in the neighboring capitalist countries. That industrial production has, in fact, doubled compared to pre-war years only makes the man in the street angry. Where are the products of this vaunted industrial expansion, he asks, what benefit does the country as a whole derive from being now one of the leading industrial powers in Europe? While in the Free World the worker is much better off today than before the war, the purchasing power of the Czechoslovak workingman's wages is only 80 percent of what it was in 1937, which was a bad year at that, at the tail end of a long depression. The cost of food is very high, consumer goods are generally priced out of reach of the majority of the population and often in short supply, the housing shortage is terrible. As a result, once-rich Czechoslovakia is starting to look like one of the poverty-stricken Balkan countries. "For one entering the country from the West," recently wrote a correspondent of the *London Times*, "Czechoslovakia creates a depressing impression of drabness and uniformity. The contrast with Austria, for instance, a country whose standard of living before the war was, if anything, slightly below that of Czechoslovakia, is revealing. The outward aspect of Prague, its shop fronts, the way people are dressed, the state of repair of the buildings, seldom rises above the level of the poorer parts of present-day Vienna, and certainly never approaches the best standards of that city. There seems to be no individuality and no pride of posses-

sion. A factor making for uniformity and lack of initiative is probably the low differential between wages. It is estimated that more than 80 percent of the urban population draw the average wage, or less, of 1,270 Kcs a month." This is $180 at the nominal rate of exchange, but less than $60 in purchasing power. On that people would starve if rents were not so low. As it is, they can buy sufficient food but practically nothing else.

In agriculture, Czechoslovakia has not yet reached the production levels of 1937. Although there are almost 2 million mouths less to feed than 20 years ago, imports of grain and cereals have been as much as 5 times higher than before the war. Until the latter part of 1953 collectivization was pressed in spite of farmers' resistance and of the inefficiency of the JZDs (the Czechoslovak "kolchozes"). At present, the collective farms, which now hold about one-half of the arable land, are favored by write-offs in taxes, concessions in delivery quotas and delivery prices, generous and timely assignment of agricultural machinery from the Motor Tractor Stations, but the individual farmers are more or less left in peace. Even the brutal persecution of the "kulaks" (euphemistically called "village rich" in Czechoslovakia) has ceased, or at least takes milder forms now. One hardly ever finds in the Czechoslovak press nowadays the preposterous accusations against the "kulaks" which filled many a column a few years ago, lists of "kulaks" are no longer posted on the village bulletin boards, and the ruinous 10 percent delivery surtax is no longer leveled. Of course, there are preciously few village rich left, and the smaller individual farmers have a hard struggle, too, what with high delivery quotas, lack of help (women provide more than half of farm labor) and machinery and low, pegged prices for sales to the state stores (there are no others). Yet the Czech and Slovak farmer stubbornly hangs on to the land of his fathers. His productivity is low because there are hardly any incentives, but still higher than that of the dispossessed farmer in the JZD. He knows that this is the reason why he has been given a term of grace, but also that in the end he will not be able to avert collectivization, unless the regime changes.

In the face of an opposition which comes from probably not less than 90 percent of the inhabitants of the country and from all its social classes, with the possible exception of the high bureaucracy and the senior echelons of the officers corps, the rulers of Czechoslovakia carry on in stubborn devotion to their Kremlin masters. The leadership group in Czechoslovakia is a close-knit little circle; to belong to it gives to the member a higher degree of job security than in the Soviet Union itself, and in any other of the Soviet satellites. Most of the leaders have been in the Czechoslovak Party since its foundation in 1921. Some of them are even the sons of prominent labor leaders (the President of Czechoslovakia and top man in the Party, Antonín Zápotocky, is the son of one of the founders of the Czech Social Democratic Party). They spent the war years in Russia, or in German concentration camps, if they remained at home. Thus the "old guard" has not been wiped out as it was in Russia — on the contrary, it still firmly controls State and Party. There have been purges, of course, but in the main they were directed against men who were considered outsiders in the inner Party circle. Exceptions were perhaps Slánsky, executed in 1952, the Number 2 Communist in the country at that time, and the most prominent among the Jewish intelligentsia in the party leadership eliminated in the 15 months between November 1952 and January 1954; and the Slovak Communist leaders sentenced in April 1954, ostensibly because of separatist tendencies. The recent purge of the First Deputy Premier and Minister of Defense, Alexej Cepicka, felled a very powerful man, but a comparatively new Communist who owed his spectacular rise to being the son-in-law of Klement Gottwald, the Czech Stalin, who even died within 10 days of his great master and who is now being de-canonized just as Stalin is in Russia. A well organized and devoted "apparatus" backs up the Party leadership, and behind it is an efficient and ruthless Party militia in the guise of the different police forces. With the threat of Soviet intervention always in the offing, the Communist regime in Czechoslovakia can be expected to keep in check for some time to come a reluctant and restive people, albeit not without difficulty. The Czechoslovak leaders will not slacken in their determination to keep Czechoslovakia what it is today, a Soviet colony, nor will they be allowed to slacken, because economically Czechoslovakia is of the utmost importance to the Soviet Union. We can but hope that in the many years of Soviet domination that probably are still in store for them, the Czechs and Slovaks will succeed in keeping alive their love of freedom and their will to resist. They will succeed if the events of the last 3 years are any indication of what will happen in the future.

US MC

★ ★ ★ ★

Ship Ahoy!

A PRESENT-DAY COLONEL of the "Old School" reminisces of the Nicaragua days and a heavy rainstorm. During the storm, duck boards (used for tent decking) from the tents in Officers' Country were floating in the company street. Sitting on one of the wayward duck boards was a young, clowning lieutenant, clad only in his breeches and puttees, wielding a stick in lieu of a paddle and going through the complete, but exaggerated motions of paddling the decking. Then, from the far end of the street, the grizzled "Old Man" bellowed, ". . . lieutenant ——— get off that ———, and ——— and get back to your quarters!". From the lieutenant, ". . . but I can't swim, Colonel . . .". Within a split second the Colonel roared, "Then paddle yourself back to your ——— ——— tent for 10 days . . . ! "

Maj N. C. Manley, Jr.

(The GAZETTE will pay $10.00 for each anecdote published. Submissions should be short and pointed.)

in brief

To fill a need outlined by the Marine Corps in 1947, the Cornell Aeronautical Laboratory of Buffalo, NY, has developed an accurate surface-to-surface guided missile, the *Lacrosse*. Intended for close battlefield support, the launcher is mounted on a standard military truck, giving access to any area open to vehicular transport. The missile is being produced by the Glenn L. Martin Co.

Radio Division of Bendix Avn Corp has unveiled a new radar system designed to plug gaps in radar network. Previously it has been possible for a low flying plane to penetrate a radar screen by flying in the blind areas between long-range search radar sites. These gaps are caused by the "sweeps" of the long-range stations slanting off into space instead of following the curvature of the earth. The "gap-filler" system will be tied in with the nearest long-range radar site to an unbroken warning network against intruding aircraft.

The Army has announced the development of a new, extremely light-weight radar set, transportable on foot by the 2 men who operate it. The set is drum shaped, 14 inches high and 14 inches long and weighs only 25 lbs. Power is supplied by a compact, low-power motor generator which is easily carried by one member of the team. The great reduction in size is due to the elimination of the radarscope.

This set utilizes an audible signal for tracking instead of the usual visual signal. It can track a small vehicle or foot patrol at distances up to 3 miles. In the hands of an experienced operator it can distinguish personnel from vehicles and even tracked from wheeled vehicles. It provides range and elevation data with an accuracy of better than 25 yards.

Continuing the high standard of excellence set by Marine shooters at Camp Perry, a group of 3d Marine Air Wing pistol shooters entered the San Diego Police Revolver matches and carried away a variety of medals and trophies. The Wing Expert team took first place in the .38 calibre team match. A number of individuals won medals and trophies, including several in the International Matches.

In a letter appearing in *The Research Report* of the Land Locomotion Research Laboratory, Detroit Arsenal, Mr. J. R. Doyle, Senior Product Engineer of the Oliver Corp., states some of the difficulties hindering the development of a truly amphibious vehicle. He believes that the reduction of swimming ability and low water speeds now being specified are unrealistic. The undeveloped areas of the world which require such a vehicle have a large share of swamps, lakes and rivers. He further states that much of the research now going on is largely taken up with modification of amphibious vehicles now in existence. Such research is not sufficient and we must adopt a more fundamental approach to the matter.

The ordnanceman above is holding the new general purpose machine gun T161, developed by Ordnance for use by all US forces to replace the .30 caliber weapons. It is developed from German MG34 and MG42 models and fires the 7.62mm round.

Ordnance has also released the latest modification in tanks — the M48A2 — a 54-ton, 90mm gun tank with 4 machine guns designed to protect its 4-man crew from atomic blast.

LFMs 7 and 24 have now been released and are being distributed through normal channels. LFM 7, *NGF Tactics, Techniques and Planning*, and LFM 24, *Helicopter Operations* both contain portions which are classified "Confidential" though in the case of the latter only one appendix is classified. Both manuals are in the new red format (see GAZETTE, Nov '54). All future manuals will use this format.

Stable Mable (above), a single place, rocket powered helicopter, weighing 230 lbs has been successfully tested by the Army. The craft was developed by Kellett Aircraft Corp under the joint sponsorship of the Office of Naval Research and the Dept of the Army to study stability and handling characteristics of rotary-wing aircraft.

The craft is powered by rocket engines mounted in the rotor tips. Hydrogen peroxide, is stored in 2 spherical tanks mounted on either side of the pilot. It has a range of 16 miles at 60 miles per hour. As an operational vehicle this could be greatly increased. Its chief function at present is flight testing a new gyro-stabilizing system.

The Dept of Defense is currently compiling a list of Medal of Honor winners, their children or next of kin. The present home or military addresses of these persons should be sent to: Medal of Honor, Dept of Defense, Washington 25, DC.

British troops now operating in Malaya are equipped with a folding cross-cut saw (below). It is very useful for clearing air supply dropping zones and helicopter landing fields. It makes less noise than a machete and can fell bigger trees.

By Col F. P. Henderson

Part III

BOUGAINVILLE AND KAVIENG

AVAILABLE INTELLIGENCE INDICATED that there were not many Japanese defending the Cape Torokina area. The Marine Corps monograph *(Bougainville and the Northern Solomons)* has this to say about I MAC's knowledge of the enemy's strength.

"Intelligence information regarding the strength and disposition of Japanese forces on Cape Torokina area was meagre, and the very nature of the jungle in that area prevented secrets hidden beneath dense foliage from appearing on aerial photographs. True, there were signs of activity on Cape Torokina itself, but the character of the photographs prevented an exact determination of the extent or characteristics of the activities there." After D-day it was found that the Japanese garrison at Cape Torokina on 1 November amounted to about 270 officers and men. Their fortifications consisted of "18 pillboxes solidly constructed with coconut logs and dirt, and connecting trenches and rifle pits." But during the planning phase, no one could be certain that the dense jungle, which came right down to the water's edge, did not contain many more troops and fortifications.

I MAC and 3d Mar Div studied this situation very closely to determine what their minimum gunfire requirements would be. It was their conclusion that any sound gunfire plan must provide the necessary ships to quickly take out the known enemy defenses on D-day as there would be no pre-D-day bombardment. In addition, there must be sufficient additional ships standing by to quickly take under fire any extensive and hitherto undiscovered Jap defenses encountered. The success of the operation was considered to hinge upon our ability to rapidly debark and land our assault troops and quickly seize an initial beachhead to permit debarkation and landing of the remaining troops and the assault-loaded supplies.

The Torokina area was only 210 miles from the long dreaded Japanese base at Rabaul, and even closer to their airfield at Kahili and Buka on Bougainville itself. Surprise, as to time and place of landing and rapidity of establishing our assault troops ashore, was essential if we were to prevent the certain enemy reaction by air and sea from sinking or driving off our transports before the landing force was fully established ashore — as had happened at Guadalcanal. In planning the naval gunfire support, therefore, it was felt that every possible measure must be taken to insure that the assault waves were not held up on the beaches by enemy defenses, or their progress inland slowed by lack of fire support if they encountered previously unlocated enemy forces.

The final gunfire plan as worked out by corps and division called for a gunfire support group of somewhere around 4 heavy and light cruisers and 8 or 10 destroyers. They were to give a heavy pre-H-hour bombardment to areas known to be defended by the Japs, especially Cape Torokina itself, and lighter bombardment along the other landing beaches which appeared not to be defended. Shore fire control parties were to go ashore with the assault battalions. The 12th Marines' air spotters, flying in Marine SBDs from Munda, were to act as naval gunfire air spotters. All assault units would have direct support ships that they could call on for immediate fire support if they ran into heavy resistance. To insure that known or unlocated enemy machine gun or antiboat gun emplacements on the landing beaches were promptly and positively knocked out, corps planned to station a couple of destroyers right off the north end of Puruata Island. From here they would have a range of about 2,000 to 2,500 yards to the Cape Torokina beaches and about 1,000 yards to the Puruata beaches. Ranges to any of the other landing beaches would run from 1,000 yards on up to a couple of thousand yards.

Plans called for having an artillery officer aboard each of these DDs

in the Solomons

Our experience proved that NGF support of an amphibious assault was one of the most important missions surface ships could perform

as gunfire spotters. It was felt that these ships would provide the close fire support needed during the final run to the beach of the landing craft and would save boat and troop casualties from antiboat guns or machine guns which might open on them. Furthermore, they would be in position to carefully search the landing beaches for previously undiscovered enemy fortifications, and if found, take them under fire before they could do any damage.

In preparing their gunfire plan, the Corps and Division gunfire officers had consulted frequently with the III Amphib Force gunnery officer. When the first draft of the gunfire requirements and plan was completed, a group of Corps and Division staff officers took them to Camp Crocodile (the Phib Forces Hq) to present and discuss them. They expected they would be quickly approved, with only minor changes. Their optimism changed to dismay when Amphib Force vetoed their plans as being impractical and requiring excessive fire support. Further efforts by Corps to have its plan adopted were futile.

As a result, the gunfire plan which was used on D-day was the creation of the III Amphib Force. Corps and Division had to go along with it because they couldn't get anything better. Phib Force's plan provided for only 4 destroyers to constitute the entire gunfire support group for pre-H-hour and post-H-hour fires. The length and intensity of the pre-H-hour bombardment and the provisions for direct support of assault units were far below the stated troop requirements.

Furthermore, the positioning of the fire support ships for both pre-H-hour and post-H-hour firing contributed to the inadequacy of the fire support. Three of the destroyers (*Sigourney, Anthony* and *Wadsworth*) were to be stationed to the *southeast* of Cape Torokina. They were to open their bombardment quite far out and then close the range if they did not receive any return fire. This setup was fatally defective for two reasons. The first was that the ships could not see any of the landing beaches or targets they were to fire upon since they were on the wrong side of Cape Torokina from the beaches and enemy defenses which could oppose our landing. In combination with the questionable accuracy of the maps, this meant that their scheduled fires could not be spotted onto the targets or assigned areas except by an air spotter. Furthermore, they could not possibly visually locate and take under fire any targets of opportunity opposing our landings. The other weakness was that the tall palms and jungle growth covering the entire target area would be between the ships and their targets and would detonate many of the shells before they ever reached the designated impact area. In the case of neutralization or destructive fires planned on the beach defenses this would be especially true as the destroyers closed the range and their trajectories became more and more flat.

The fourth destroyer, the *Terry*, was positioned on the opposite flank of the landing. Its location here was apparently a partial concession to the landing force desire to get a couple of destroyers right in off the landing beaches where they could look down the enemy's throat. The *Terry*, however, was so far out in left field that it in no way accomplished the purpose Corps had intended. It was some 9,000 yards away from Cape Torokina, about 8,000 yards from the Puruata Island beaches, and about 2,500 yards from the left flank of the left landing beach of the Division. So its ability to visually detect and take under accurate, direct fire any enemy defenses opposing our landing was nil in the known defended areas of Cape Torokina and Puruata, and only minor in the other landing beaches which apparently were not defended.

The results of this inadequate gunfire support bore out the dire predictions of the Cassandras in Corps and Division. Untouched enemy defenses took a heavy toll in the assault waves on the right beaches of the 3d Mar Div. They damaged or sank many landing craft and created great confusion among the assault boat waves and groups on the right of the landing. The Marine Corps monograph gives a very good idea of the damage caused by these defenses. Here are some excerpts:

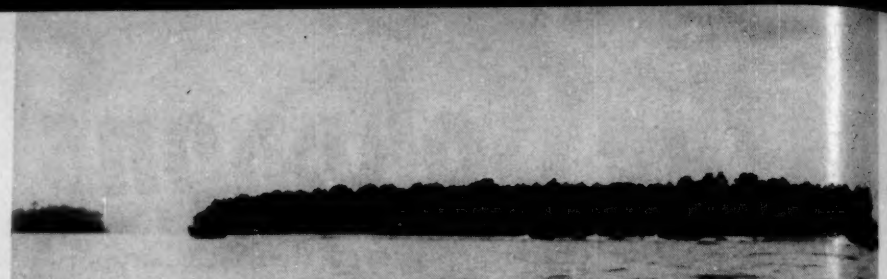
"On the northwest shoulder of the

12th Marines' air spotters in SBDs over Empress Augusta Bay

Cape on the Raider's beach, a 75mm mountain gun was emplaced in a coconut log and sand bunker. . . . As the boats came into range, this gun began to fire at them and succeeded in destroying about 4 and damaging 10 others with 50 high explosive shells. . . . Typical of all these boats was No. 21 of the *Adams*. . . . Less than 20 seconds before this boat was to reach the beach, 3 shells from the Japanese 75 hit the boat in rapid succession, the first shell killed the coxwain and put the boat out of control, while the second and third shells killed both lieutenants and 12 enlisted men, while wounding 14 others. . . . In the meantime the Boat Group commander's boat had been shot to pieces by the 75 and the boat waves were completely disorganized. As a result, assault companies of the 1st Bn, 3d Marines, landed in an order practically in reverse of that planned. To make matters worse, the Japanese opened up with their beach defense machine guns, and those Marines who were able to get to shore unscathed had to cross the beach through a hail of fire."

In discussing the Bougainville campaign, Professor Morison notes that, ". . . our preliminary bombardment had not knocked out the enemy's well concealed machine guns on that island (Puruata) and on Cape Torokina." The Marine Corps monograph makes the following remarks concerning gunfire support. It says: "Gunnery performance of several fire support ships left much to be desired when firing on shore targets. Some ships fired short for almost 5 minutes with all salvos landing in the water. When finally on the target, however, our gunfire was helpful in the initial landing. It must be said, however, that the nature of the terrain was such that effective support was difficult and shells frequently detonated against trees before they reached their targets."

It was unfortunate that Phib Force had turned down I MAC's request for some gunfire support ships to remain on station continuously after D-day for they would have been extremely valuable during the early stages of the operation. Gunfire support after D-day was a sporadic affair and depended upon the arrival of convoys with their destroyer screening escort. This prevented Division and Corps from ever making any firm plans to use naval gunfire in direct support of troop operations ashore. They couldn't make gunfire a basic element of any operational plan if they weren't certain whether they would have the ships available. In the critical 2 weeks after D-day, when powerful naval gunfire support would have been an immense help, fire support ships were available only 5 times, and that for daylight hours only.



Landing craft in trouble off Puruata on Cape Torokina

Practically all of the gunfire operations on Bougainville after D-day were Corps general-support-type operations aimed at delaying and breaking up the enemy effort to concentrate troops and supplies for an attack on the beachhead. When the Japanese finally began to believe that our Torokina landing was not just a feint or a raid, but that the Marines were there to stay and were a grave menace to Rabaul, they began their preparations for an offensive which would drive us out of the beachhead. Before long, Corps G2 had determined that their main staging and concentration areas were at Jaba, Marawaka and Mosigetta. Supplies and troops were accumulating in these areas as a result of truck or barge movements, awaiting further movement north to the beachhead area. Corps wanted to disrupt this operation to the greatest extent possible in order to gain enough time to thoroughly consolidate the beachhead, prepare a fortified perimeter, and complete construction of the airfields.

The gunfire operations planned to accomplish this were conducted in an almost identical manner with those the 2d Mar Div had carried out against Japanese rear areas on Guadalcanal. Corps G2 and G3 would select the targets and areas they wanted shot up and the Corps gunfire officer would work out a plan for a day's firing for one or two destroyers when they became available. Either the Corps gunfire officer, the Division gunfire officer, or an officer from the 12th Marines would embark on each of the gunfire ships shooting for Corps and ride it throughout the period of the bombardment. Sometimes one of the 12th Marines' air spotters was available to give some air spot assistance if the ship was shooting into an area which could not be observed from seaward.

The shooting was generally well conducted and was rewarded by numerous fires, secondary explosions, and so on. Corps never was able to determine exactly how much damage or delay these bombardments inflicted on the Japanese. However, it was worthwhile to note that not until 9 March 1944 were the Japanese able to mount their counterattacks against the perimeter.

The only real close support gunfire shoot the Marines had at Bougainville took place in connection with the abortive raid of the 1st Parachute Bn at Koiari. In the latter part of November, Corps felt that a strong raid in the Empress Augusta Bay area might do much to delay the enemy buildup by cutting their lines of communication, destroying supplies and inflicting casualties. For this mission the 1st Prcht Bn, which had arrived at Bougainville on 23 November, was selected to make the raid. This battalion, with a company of Raiders attached, was to land about 3,000 yards northwest of Koiari, establish a temporary base there, and raid up and down the

coast and inland for about 4 days. Then they would be withdrawn and returned to Torokina. In view of the successful raid conducted by the 2d Prcht Bn on Choiseul, Corps was hopeful that this raid would have beneficial results.

The battalion embarked on LCMs and LCVPs and sailed down the coast making their landing about 0400 on 29 November. To their surprise they found they had landed right in the middle of a large, previously unlocated Japanese supply installation. The battalion quickly seized a beachhead about 350 yards wide and 200 yards deep — and that was as far as it ever got. By 0800 the battalion commander concluded that he could not possibly accomplish his mission and feared he was in the presence of greatly superior Japanese forces. Accordingly, he requested Corps to re-embark and to withdraw his battalion at once. So the landing craft from Torokina shoved off again to go down south and re-embark the paratroopers. They made two different attempts to run into the beach but each time were driven off by heavy concentrations of enemy mortar and automatic weapons fire on the beaches and their seaward approaches.

If ever a unit was saved by supporting fire, it was this group of paratroopers. When the operation was being planned, the Corps artillery officer suggested that 2 FO teams from the 12th Marines be attached to the paratroopers so that if they did run into anything tough, they could get some supporting fires from the 155 gun battery of the 2d 155mm Arty (Gun) Bn. (This battery constituted the entire corps artillery at Bougainville!) This battery was laid to shoot down along the shore of Empress Augusta Bay to cover the enemy's line of communication and reinforcement from the Kahili area into the beachhead. Thus it was in a good position to cover the area the paratroopers expected to be roaming about in. At first the paratroopers balked at taking the FOs along. They either didn't expect to run into any real opposition or else had an overabundance of Gung-ho esprit. After a little insistence on the part of Corps, they agreed to take the FO teams. It was fortunate they did, for these FO teams from the 2d Bn, 12th Marines proved to be their salvation. Throughout the day while the paratroopers were holding their tiny perimeter, the FOs supported the defense with 155 concentrations which they brought in as close as 200 yards to the front lines at ranges around 16,000 yards.

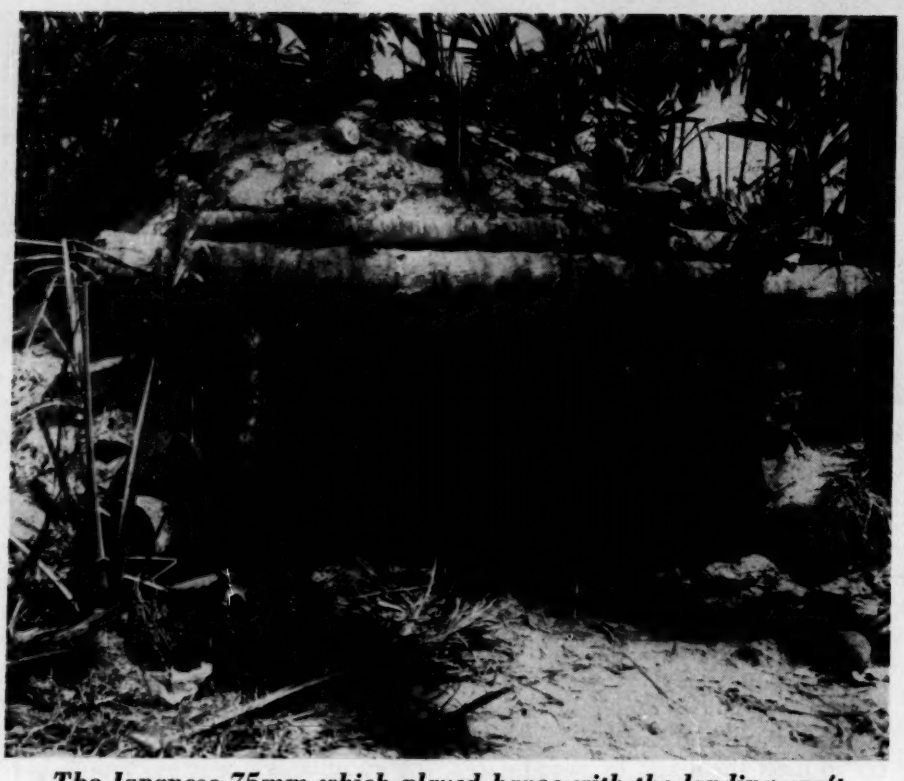
When the situation began to look precarious for the paratroopers, Corps had radioed back to Navy for some fire support ships to come up and help get the frustrated raiders off the beach. As luck would have it, an unloaded convoy had left Torokina that morning. By the time the Navy had sized up the situation and given its okay for fire support ships, the convoy was down somewhere around the Treasury Islands. Three of the screening destroyers were given orders to peel off and head back for Koiari at flank speed. The Corps commander sent the Corps gunfire officer and another staff officer to meet them and to co-ordinate the withdrawal operation on the spot. They boarded a PT off Torokina for a high speed ride to the beaches off Koiari. There they found the landing craft still milling around, while the enemy was still plunking away whenever the boats came into range.

After looking the situation over and talking to Navy officers who were afloat off the beach, they decided on the following plan. The staff officer would go aboard the LCI on which the boat group commander was embarked and help them get organized to run into the beach under cover of destroyer gunfire support. The Corps gunfire officer would board the destroyer division commander's ship and set up a gunfire plan to cover the withdrawal. As soon as the destroyers arrived, they would come up on the spotting frequency the FOs were using with the 155 guns and get the FOs to adjust them in around the perimeter. When they were all set, they would open up and put down normal barrage-type fires. The landing craft would then dash in to pick up the paratroopers. Everyone was praying that the destroyers would arrive before dark so that they could be shot in close to our front lines on the strange terrain.

Many anxious eyes scanned the southern horizon as the minutes slowly dragged by and the sun started setting, with still no destroyers in sight. Just as the dusk was deepening, they came tearing up over the horizon, the *Fullam, Lansdowne,* and *Lardner.* By the time they arrived off Koiari and the Corps gunfire officer could get aboard, the last remnants of daylight were fading away, and it was too late to get them shot in around the perimeter while everyone could see. While waiting for the destroyers to come up, 2 young second lieutenant FOs had been briefed over the radio on the gunfire plan.

As soon as the Corps gunfire officer got aboard the *Fullam,* he went into a huddle with the destroyer division commander and the skipper as to the situation ashore and the plan for evacuating the pinned-down troops. It was now pitch dark and no landmark ashore could be seen. It would be necessary for the ships to position themselves with radar navigation and open up shooting unobserved fires. For this reason, it was decided that the close-in fires covering the withdrawal would be given by the 155 guns and the *Ful-*

1st Prcht Bn waits to be evacuated from the beaches off Koiari



The Japanese 75mm which played havoc with the landing craft

lam, while the *Lansdowne* and the *Lardner* would shoot a little farther out from the front lines into an area where the FOs thought the mortars were.

The heaviest enemy concentration seemed to be on the paratroopers left (north) flank. It was decided that the *Fullam* would take this area as she could pump out a much higher volume of fire than the 4-gun battery of 155s, while the 155s would cover the southern part of the perimeter. This word was passed to the FOs and, accordingly, one of them took over the 155 guns and brought their fire down within spitting distance, while the other FO started the *Fullam* shooting. Although it was his first experience at shooting naval gunfire, he handled it like a veteran.

The *Fullam* got herself squared away and opened fire on the point the FO requested, which was about 600 yards behind our lines. He planned to pick it up from there and walk it close in by sound adjustment. The *Fullam* was a sharp shooting ship and her rounds were apparently where the FO had asked for them. In two or three more spots, he had them just where he wanted the barrage. The 155s and all ships then started shooting for keeps while the word was passed to the landing craft to go on it. Meanwhile, the 2 FOs calmly walked the fires of the 155s and the *Fullam* up and down along the perimeter, adjusting the fires in the dark by sound of the bursting shells just as expertly as if they had been sitting on an OP in broad daylight. (Morison was right about Marines in his comments on that big shoot for the Army on New Georgia!) The FOs, the 155 battery and the ships all did marvelous jobs, as never a round fell within our own lines. Even greater testimony to the effectiveness of their fires was the fact that the Japanese were meek and quiet during the entire withdrawal operation, despite the heavy concentrations of fire they had delivered on the previous attempts to get the boats in to the beach. The FOs were in the last boat to shove off the beach. Before signing off with "CSMO," they gave a final spot and asked to keep the fire going while they made the run to the boats and got out to sea.

Bougainville ended the gunfire shooting war for the Marines in the South Pacific. No gunfire support was required for the seizure of the Green Islands by the New Zealanders in February 1944 or the unopposed landing by the 4th Marines (Reinf) on Emirau Island in late March '44. After I MAC Headquarters and the 3d Mar Div returned to Guadalcanal from Bougainville, in December of '43 and January of '44 respectively, their efforts were devoted to training and planning for the Kavieng operation, whose D-day was scheduled for 1 April 1944. The seizure of the important and strongly defended Jap base at Kavieng was to be the final and clinching operation by SOWESPAC and SOPAC forces in the isolation of Rabaul.

I MAC was assigned the responsibility for planning and conducting the Kavieng operation and was assigned the 3d Mar Div and 40th Inf Div, plus a considerable number of supporting troops to do the job. From all available intelligence, and from our hard-won experience in fighting the Japanese in the Solomons, it appeared that Kavieng was going to be a tough nut to crack. The enemy had a strong army and navy garrison there who had a lot of time to dig in — and had not been wasting any of that time. When we once established sea and air superiority in the area and put the landing force ashore, the Japanese garrison would have no hope of evacuation and not much hope of reinforcement. So it was presumed they would stage a bitter fight to the last man. To properly prepare the way for the landing force, and support it once it was ashore, Corps and Division worked up an air and naval gunfire plan which would have given the Japanese the most terrific shelling they had yet received anywhere in the Pacific. By now there were ample combat ships available in the Pacific for gunfire support, including some of the old Pearl Harbor battleships which had been refitted.

Corps' gunfire plan called for the advance force of fire support ships to start shelling the Kavieng defenses on the morning of D—4. From then until D-day, battleships, cruisers and destroyers would carry out a methodical destruction of the Japanese fortified positions, using both air spot and shipboard spot, and plenty of direct fire at short ranges. While part of the fire support ships would retire during the hours of darkness to evade enemy air or submarine attacks, other fire support ships would remain off Kavieng and shoot harassing fires during the night to prevent rebuilding of destroyed fortifications, shoot up the areas where it

was believed troops would be out in the open at night, and continue to lower their combat effectiveness through the demoralizing effects of prolonged naval gunfire.

During the pre-D-day bombardment the ships would be assisted in their task of reducing the defenses of Kavieng by Marine planes, operating from the fields on Bougainville and Green Islands. On D-day the fire support ships were to deliver intense pre-H-hour fires as the landing force prepared to assault the beach. After H-hour there would be ample supporting fires, both scheduled and on-call. Shore fire control parties and air spotters were provided to insure that the ships could deliver their fires when and where the landing force needed it.

III Amphibious Force approved these troop requirements with only minor changes. Thereafter, the detailed, concurrent planning went forward very rapidly. A nice, fat naval gunfire annex, which was similar to those that were common by the end of the Pacific war, was soon completed and on its way to the many ships and units who would participate in the operation. All hands were looking forward with great interest to the first full demonstration of what naval gunfire could really do when used properly and n sufficient quantity. The chance to see this at Kavieng was suddenly ended when on 12 March, the Joint Chiefs of Staff directed that the operation be cancelled and Emirau be seized instead.

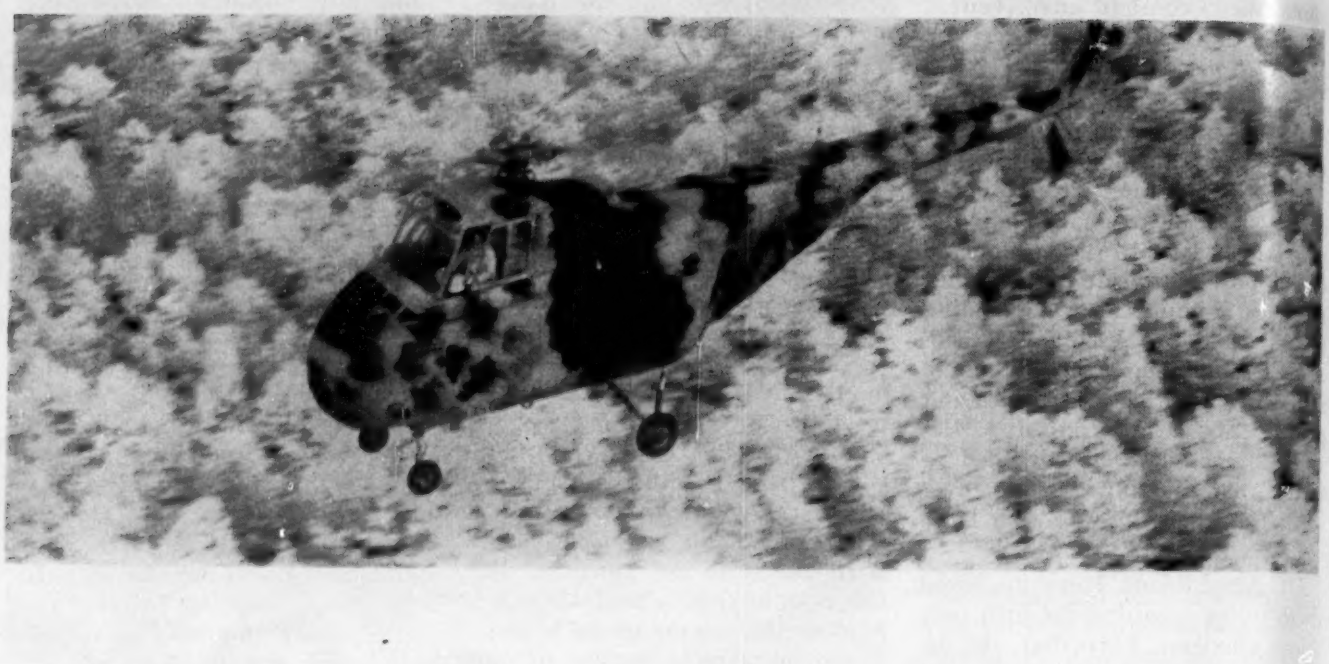
All of the hard work which had gone into the planning was not wasted, however. Many Marine and Navy officers received invaluable training in the conduct of big scale naval gunfire planning for an amphibious assault. The planning wasn't entirely wasted in a practical sense, either, for COMSOPAC sent a bombardment covering force to shell Kavieng while the 4th Marines were making their landing on Emirau on 20 March. Four of the old battleships (the *New Mexico, Mississippi, Tennessee* and *Idaho)* fired a total of 1,079 rounds of 14-inch and 12,281 rounds of 5-inch during the day, severely jolting those on the receiving end. The Japanese said it was "demoralizing" — and that was only a taste of what they would have got.

In trying to determine how much good naval gunfire in support of troop operations ashore accomplished in the Solomons, I believe it is best to consider the Solomons campaign as a period of learning and training for bigger things to come. As far as producing decisive results on the battlefields of the Solomons, naval gunfire cannot lay claim to many honors. From the first round fired on 7 August 1942 at Guadalcanal to the last round fired at Kavieng on 20 March 1944, we can find only a few instances where naval gunfire came to the aid of troops badly in need of fire support. Through its operations against the enemy's logistic and command systems, naval gunfire probably made a fairly respectable contribution toward victory in the Solomons. But this is an intangible field where it is hard to measure the results in terms of ground taken or lost and friendly or enemy casualties. As we have seen, the principal reasons for the failure of naval gunfire to play a bigger part in the Solomons campaign was due to a chronic lack of gunfire support ships, a failure on the part of some to realize the dependence of the troops in an amphibious assault upon powerful and continuing naval gunfire support, and a wide lack of proper training in naval gunfire planning and use.

The big pay-off of our naval gunfire operations in the Solomons was in the invaluable training it gave to many Marine and Navy officers in how to plan for and execute naval gunfire support, and in proving to all hands, afloat and ashore, that powerful naval gunfire support was one of the essential ingredients for success (without high casualties) in an amphibious assault. For those officers who were directly concerned with gunfire planning and execution during the Solomons campaign, their experiences there prepared them to handle the bigger and more complex gunfire problems encountered in later campaigns of the Pacific war. The gunfire officers of both the III and V Amphibious Corps staffs in 1944 and 1945 had participated in naval gunfire operations in the Solomons. A much wider circle of Marine officers serving on division and corps staff, and in infantry and artillery units, had some first hand experience in finding out what naval gunfire could and couldn't do. They had even more experience in not having it available when they could have used it to great advantage, but this bred in them a very strong desire to get and use naval gunfire in the future. By the latter part of the war these officers were spread throughout the whole Fleet Marine Force, Pacific and were to be found in all of our divisions and corps.

Of equal importance to the Marines who were to assault future defended beaches on the road to Tokyo was the fact that the Navy was now fully gunfire support conscious. Through trial and error they had learned what it took to do the job required and how to go about doing that job in the most effective way. They, too, now believed that naval gunfire support of an amphibious assault was one of the most important missions that surface combat ships could perform. After our long series of disappointments in trying to get adequate gunfire support for our landings in the South Pacific, the Kavieng bombardment plan was dramatic proof that the Navy also now believed that you shouldn't send a boy to do a man's job. For the rest of the war, we would see the landing force and the attack force working closely together on their gunfire problems with the same idea in mind — that the mission of naval gunfire was to pave the way for the assault of the beach and thereafter give reliable and continuous fire support to the troops ashore.

If you want to believe that in the future all of our amphibious assaults will be conducted under ideal conditions, then this tale is only one of historical interest. But if you want to believe that some one of these days in the future, a Fleet Marine Force unit will be required to make a hurry-up landing in some obscure corner of the world, and there fight a crucial battle with hastily assembled forces and meagre support; then this story might have some practical value to future commanders and staff officers. It does prove that where there's a will there's a way; and that though the road may be long and difficult, virtue triumphs in the end (i.e., you can't keep good Marines down). USMC



PAINT 'EM GREEN!

By R. K. Walsh

DO YOU BELIEVE IN REINCARNATION? Perhaps not, but what other explanation could there be for the present color of our helicopters?

I say it is a reincarnation of the purple cow!

Shortly before the organization of the Marine Corps, nature gave to most animals some degree of protection in the form of coloration. Not so the purple cow. Not so the blue helicopter.

Fortunately the Marine Corps doesn't have to solve the vulnerability problem inherent to the purple cow. Even the pink elephant problem has been partially solved for us by Alcoholics Anonymous. But what is to become of the blue or even gull grey helicopter?

During the Korean campaign we were indeed fortunate that there was only limited, if any, air offensive operations over United Nations held areas. However, the likelihood of such enemy activity in the future is far from remote and the necessity for helicopter camouflage is, therefore, real.

Let's throw a net over it! An excellent idea, but somewhat unrealistic considering the tactical mission of rotary-winged aircraft. Actual front line operations generally dictate that the vulnerable helicopter be on the ground for relatively short periods. Precluding the time element, even lightweight netting for such a large object as a transport helicopter is quite heavy and therefore imposes a serious weight penalty when carried in the aircraft. Add to this the realistic problems of correct placement, handling characteristics and lack of sufficient on-the-spot personnel for erection, and the net concept as regards tactical missions is out of the picture.

No net, no protection? Not so. One of the oldest deceptive measures used is that of tone-down painting. However, as opposed to the theory of the ostrich, the application of protective coloration does not guarantee complete disappearance.

In contemplating the use of painted schemes for helicopters, it must be assumed that all other camouflage techniques, such as employment of available terrain features for concealment will be employed to the fullest. In other words, the painted scheme will serve only as one of several camouflage techniques in any one camouflage situation. In contrast to the purple cow the heli-

copter presents 2 distinct problems: 1) the development of suitable painted schemes for the fuselage; and 2) the concealment of the rotor blades.

From whom are we concealing our helicopters? The enemy on the ground or our enemy in the air?

Both. Normally the helicopter, discounting special mission, will be seen against terrain backgrounds; against landing zones and approach and retirement lanes.

Helicopters can be expected to operate during all seasons in any geographical location and in any terrain condition that will allow the conduct of ground warfare. The 4 general geographical areas that exhibit definite color characteristics are arctic, temperate, tropic and desert. Additional considerations are the seasonal color characteristics in temperate climates. Fortunately for the camoufleur, desert and arctic areas do not present the wide range of color evidenced in the spring, summer, fall and winter background of temperate climates, and tropic areas remain nearly constant.

These foregoing factors cover the operational, geographical and seasonal considerations that affect visual detection. Detection by movement can be reduced but not eliminated by effective painted schemes. Detection by infra red and narrow band color devices cannot be considered here since security regulations preclude adequate coverage of this aspect.

The primary problem of concealment against terrain backgrounds is by visual detection from low angle direct observation during the 4 seasons and 4 geographical conditions. This directs primary efforts towards effective schemes under all conditions of terrain and seasonal backgrounds. To be realistic on this approach calls for simplicity of application, removal and change by squadrons operating in the field. In order to include the colors appearing in the areas and seasons listed above, yet retain simplicity, the colors appearing in the majority of terrain conditions and seasons are chosen. These are light green, dark green, earth/sand, olive drab and white.

By compromising effectiveness, but gaining in simplicity, seasonal colors can then be matched with terrain conditions to produce the following schemes and colors:

1) *Spring, Summer and Fall Scheme*—light green, dark green and earth/sand.

2) *Partial Snow Scheme*—White, dark green, light green and earth/sand.

3) *Full Snow Winter Scheme*—White.

4) *Desert-Sagebrush Scheme*—Earth/sand, olive drab and white.

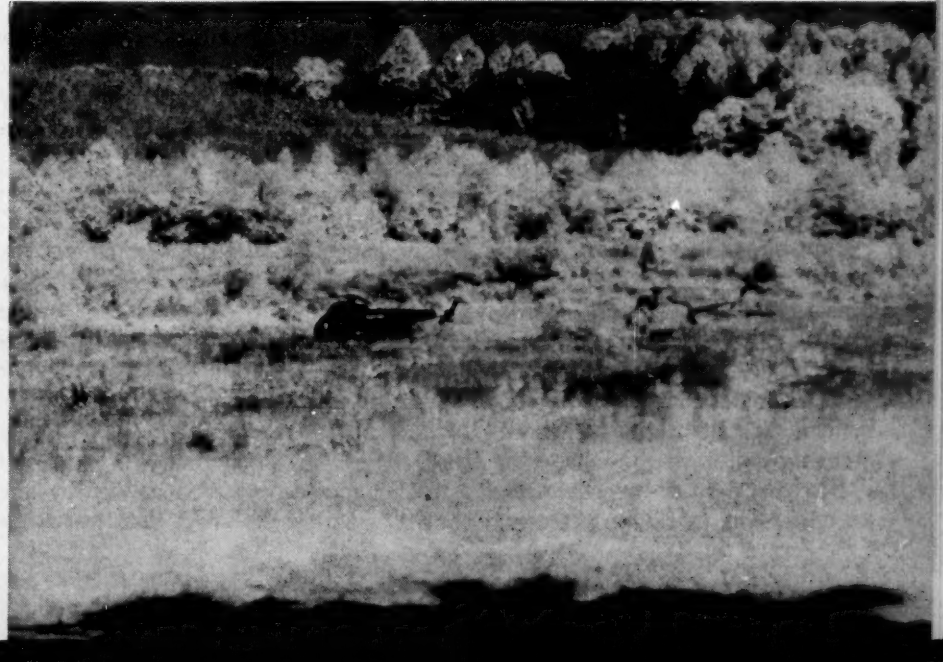
How often does the aircraft need a new paint job? Normally the Spring, Summer and Fall Scheme for use in temperate and tropic areas will constitute the major seasonal pattern. This primary scheme can be converted to a partial or full snow pattern by the addition of white. Conversion to the desert-sagebrush pattern is accomplished by slight modification and the addition of olive drab.

The aforementioned procedure provides a simple, effective combination consisting of one basic paint (light green) applied by the manufacturer or overhaul activity and 4 temporary paints (dark green, earth/sand, olive drab and white) to be applied over the basic paint to provide the desired scheme. These latter 4 paints are easily removable with mineral spirits or other low flash solvents. As previously explained the 4 removable paints are applied over the basic green helicopter to simulate various terrain conditions when seen against different seasonal backgrounds. This apparent overlapping of conditions may be explained by further outlining the paint purposes.

The earth/sand removable paint simulates barren earth during all seasons, with the exception of the Full Snow Winter Scheme, and also acts as an illuminant to create a countershading effect, an effect necessary to help distort the natural outlines of the helicopter. This countershading effect is of vital importance in concealing an object the size of a transport helicopter since naturally occurring shadows are distinct and easily recognizable. These shadows will often reveal a large camouflaged item by their shape and relative position even when the object itself cannot be positively identified. This aspect then must be considered and compensating measures taken. The action taken, in the case of a painted helicopter, is the addition of this light hue to soften or partially illuminate dark undersurface or concave areas. During the Partial, Full Snow Winter and Desert-Sagebrush Schemes the removable white paint acts in this illumination role of counter-shading.

The dark green removable paint also depicts 2 different conditions. One is the creation of false shadows; the other the representation of low chroma coniferous foliage. The false shadow effect distorts the aircraft outlines and partially offsets the unavoidable natural shadows which, under given circumstances, cannot be predetermined. Visually the hue of deep greenish-blue coniferous

A comparison of the two color schemes



foliage is slightly different than the reflectance of foliage shadows. However, under the scope of this project, the end result of a few paints simulating many terrain and seasonal changes is the compromise penalty. This shadow-vegetation aspect is dramatically illustrated in the Partial Snow Scheme. With the addition of white paint over the Spring, Summer and Fall Scheme, the dark splotches representing scrub brush become the shadows of foliage they represented a season ago. This apparent pattern change occurs without regrouping of either scheme and further justifies the slight compromise in reflectance values mentioned earlier.

The temporary white paint is added over the Spring, Summer and Fall Scheme in increasing proportion to achieve the final goal of an all-white helicopter. The intermediate stage of paint addition is considered the Partial Snow Scheme; the all-white aircraft is regarded as the Full Snow Winter Scheme.

The olive drab removable paint is presently being used exclusively with the Desert-Sagebrush Scheme to simulate various desert growing plants of extremely low chroma. This pigmentation also acts as a shadow-simulator at short ranges. Further, this paint can be used to supplement all schemes and outstanding concealment against local operating conditions achieved if applied by a skilled camoufleur.

Why not leave the helicopter blue or grey and merely add these removable coatings over the standard surface? The argument against this reasoning comes from the purple cow's own family. "It is no more effort to turn out a brown cow than it is a purple one. Anyway, I think brown is a nice color for cows." Green is a nice color for the Marine Corps. An abstract requirement to the camoufleur but a valid one to many Congressmen. To the painter in the field, green helicopters mean less painting since the basic color is utilized as part of the overall seasonal scheme 95 percent of the time. Investigations reveal that in some instances during the summer season this basic coloring alone provides excellent concealment from all detection devices. Since this lacquer need simulate only the condition of deciduous foliage, it is possible to achieve outstanding visual concealment with this special pigmentation. Further, the squadron may not have the time or personnel to pattern paint their aircraft prior to combat. If this is the case an all-green helicopter would be the most desirable all-season camouflage color.

Thus far we have dealt with coatings especially designed for use on helicopter fuselages. Let's turn the paint bucket around and read the label—"Do not apply on rotor blades." Why not?

First, from strictly a camouflage standpoint the benefits derived from patch or disruptive pattern painting of the rotor blades is questionable.

Second, consideration must be given to critical nature of the balance, heat, material and aerodynamic requirements.

Several concealment methods have been tested, among them lightweight nets, multicolored boots and boot protrusions. The lightweight nets were considered too bulky, and, even though they did not impose a great weight penalty when carried in the aircraft, their size and difficulty of placement compromised their usefulness. The multicolored boots were not acceptable since the small degree of concealment afforded by them was nullified by the time consumed to place them on the blades. The boot protrusions, as with the multicolored boots, were bulky and difficult of proper placement. More important was the embarrassing fact that because of their size the boot protrusions actually improved detectability.

The best solution to date appears to be the use of pre-finished olive drab main and tail rotor blades. These standard blades can be modified slightly by over-spraying the tips to tone down the gloss yellow tip safety. markings. This may be accomplished by the using organization at the time of scheme preparation. This method is considered satisfactory for concealment against spring, summer and fall and desert backgrounds. Camouflage against snow backgrounds is poor to good depending on terrain conditions. Drawing-board versions indicate that white blade covers would provide sufficient additional concealment to warrant this over-spraying of standard covers by squadrons in tactical arctic operations.

Thus far we have presented a reasonable approach to fuselage and rotor blade concealment. How about rotor heads, national insignia, bureau number and organizational markings camouflage? The logical solution to rotor head concealment is over-spraying. This can be accomplished by painting only those

---

Camouflage is an ancient art and former TSgt **R. K. Walsh** adds some of his own ideas to give our aviation Marines his arguments for changing the color scheme of our helicopters. While serving with the Air Section of the Marine Corps Equipment Board, MCDC, Quantico, he came up with these deceptive paint schemes. His aviation experience with the 1st MAW in Korea, together with his background of art and painting combined to give him the basis for this article. Actually, the article is a by-product of his idea which developed into a standard project at the Equipment Board.

Discharged from the Marine Corps last summer, Walsh is now a civilian, currently free-lancing in the commercial art field on the West Coast.

portions of the rotor head which present an appreciable unpainted glaring surface. The inner critical or close tolerance mechanisms can be left unpainted. Can we overpaint the national insignia, bureau numbers and organizational markings too? Theoretically, yes; realistically, no. What then is the happy medium between show-or-no-show? The solution to the national insignia problem in the case of a highly mobile helicopter appears to be a reversible metal template. This template can be constructed of lightweight aluminum and attached with metal screws or quick fasteners to the helicopter fuselage. One side bears the national insignia. the other is overpainted with the appropriate seasonal camouflage scheme. An additional or alternate method could be a template constructed and painted in much the same manner as above and secured on the aircraft by template holders (similar to those for holding flag or general officer insignia) to facilitate ease of reversal.

Bureau numbers and organizational markings are so closely akin that concealment measures taken for one are applicable to both. The show-or-no-show questions must of necessity be a very definite show. Fortunately because of their size and relative position we can reach in the bucket labeled "see-or-no-see." Investigations reveal that a paint which displays color contrast discernible up to 100 yards is acceptable for recognition. The chemistry of this reflectance variance is complicated but it is sufficient to state that one hue applied opposite another will be recorded visually according to a set pattern. To make recognition possible only within a 100 yard radius the earth/sand paint is stenciled over splotches of the olive drab coating for the Desert-Sagebrush Scheme. Dark green can be applied over portions of the permanent green lacquer for the Spring, Summer and Fall Scheme. The bureau numbers and organizational markings required on the Partial and Full Snow Winter Schemes can be stenciled with the earth/sand paint over white.

The aforementioned 4 seasonal and geographic camouflage schemes can adequately conceal an HRS-type helicopter. A Spring, Summer and Fall Scheme for backgrounds in which normal foliage predominates; a Partial Snow Scheme where there is partial snow cover with vegetation and earth showing; a Full Snow Winter Scheme suitable for arctic areas where there is almost complete snow cover and a Desert-Sagebrush Scheme for areas characterized by lack of foliage or by sparse low chroma vegetation. Further, the permanent green basic lacquer can be applied to the aircraft by the manufacturer or overhaul activity in order that concealment can be effected for all seasons by the addition of not more than 4 (dark green, olive drab, earth/sand and white) temporary paints.

Inasmuch as rotor blades vary considerably in color and markings it can be concluded that rotor blades painted olive drab on the top and dull black on the bottom should be made available for all tactical helicopters.

Further, camouflage, by painted patterns, is successful to a great degree dependent upon distortion and illusion of the object. The patterned scheme, being a vital part of aircraft configuration, must be prepared for each model helicopter. If we can have effective camouflage schemes pouring from only 4 buckets of paint, applied in 4 man hours, removed in 10, why not take another step and investigate painting of fixed wing liaison aircraft, vehicles and other types of equipment? This concept would be relatively simple to augment and would, on a forward base scale, guarantee some degree of group life insurance for all adjacent equipments.

While we are active in this field, why not extend our investigations to cover the development of new or improved coatings for netting and other fixed installations? This procedure would enhance the marriage between applied paint and rear area type netting and would completely conceal helicopters in a folded blade and/or maintenance status.

The helicopter amphibious warfare concept needs a camouflage shot in the arm. Not an old shot held over from WW II or cast off from the other Services, but a new drug perhaps in the form of reversible lightweight patch nets, inflatable drapes or at the very least a realization that sensible camouflage costs far less in time and money than destroyed equipment. In the case of casualties the cost cannot even be assessed.

We *can* provide effective camouflage. We *must* make information available.

Only by providing our people with adequate camouflage materials and know-how can we expect to equal the effectiveness of a stealthy, patient, laborious and ingenious enemy who lives close to nature, understands it, and has the psychological make-up to desire good concealment. To start with, let's paint our helicopters green. USMC

★ ★ ★ ★

Uncover Discovered

WHILE SERVING with Weapons Co, 3d Bn, 7th Marines, 1st MarDiv, shortly after the close of the Korean war, a young second lieutenant was rotated to our command after serving 6 months in Japan. Within a week after his arrival we were subject to a CG's inspection and undoubtedly the hair cuts within the Division were bad, because the first order our lieutenant received was, "Cause the troops to be uncovered." With only the slightest hesitation the lieutenant faced about and to our surprised ears came this command, 1) Take your hats, 2) OFF! We were equally amazed, but had to marvel at the lieutenant's quick thinking when upon completion of the inspection came the command, 1) Put 'em back, 2) ON!

TSgt B. L. Lyday

(The GAZETTE *will pay $10.00 for each anecdote published. Submissions should be short and pointed.)*

WHAT HAPPENED TO THE 57?

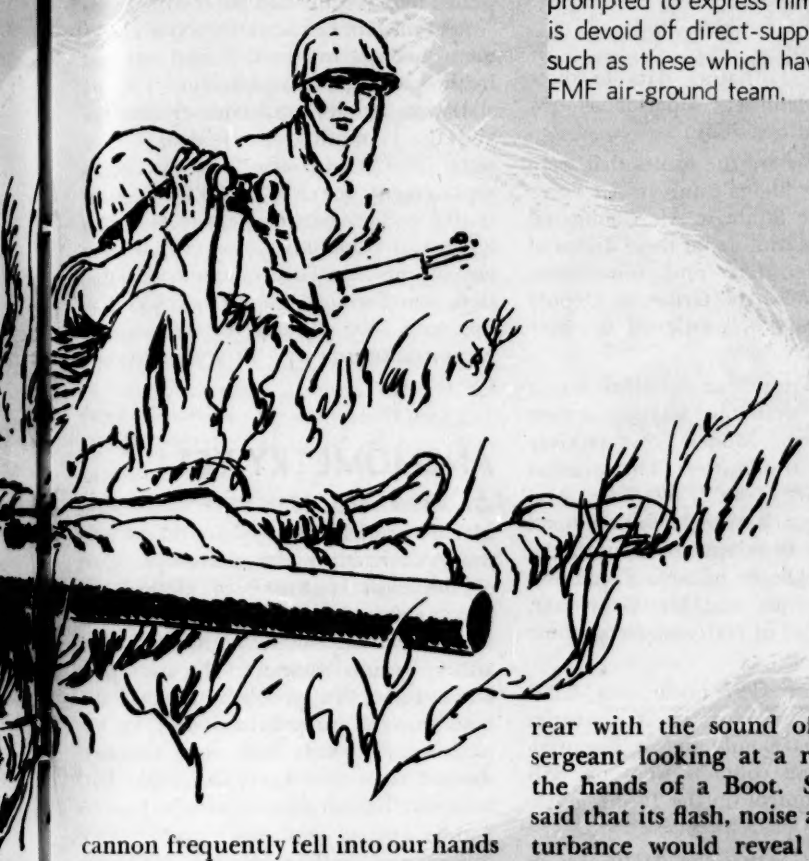
By Col L. E. Haffner

WE NEEDED A POCKET ARTILLERY piece, we had it, then we lost it.

Somehow my regiment had come by one of these Army weapons when the 1st Mar Div moved from the east to the west coast of Korea in 1952. Somehow my men kept it supplied with ammunition by the same means the weapon itself had been acquired. It was a beauty, this 57mm recoilless rifle. It was just the thing that the tired infantryman, beating his head against weapons emplacements and caves in the rugged hills and closed jungles, had always needed since the days on Guadalcanal. All during WWII, old timers often commented on how many lives could have been saved in rooting Japanese troops out of caves and emplacements if we had only retained the 37mm, model 1916 Howitzer of WWI fame. A direct fire cannon of moderate punch that could move in to support the infantryman in areas inaccessible to tanks and self propelled weapons was needed. Such a weapon was required in the tangled jungles and limestone hills in the Pacific. Such a weapon was desperately needed up on the razor-backed ridges of Korea. The advent of the bazooka met part of the requirement. However, the bazooka, then as now, is a clumsy weapon of limited range. It has to be moved to a position in close proximity to the infantry unit being closely engaged by the enemy, so close that bazookamen frequently become casualties in the small arms fire fight before they can do their job. In addition, the bazooka is one of our most lethal and dependable antitank weapons. The availability of these rocket launchers for antipersonnel employment will always depend upon the antitank worries of the battalion and company commanders. In WWII, the Japanese 70mm infantry

Prior to and during WWII, **Col L. E. Haffner** served for 6½ years in the 6th Marines without ever leaving the regiment. During that time he served as a platoon leader, had command of a rifle company, a weapons company and an infantry battalion. In Korea he had the 7th Marines 1952-53.

With such an intimate knowledge of the needs of the infantryman, he takes up the cudgels for the by-passed 57 reckless. The Colonel states that he was prompted to express himself on this subject "by the belief that the infantryman is devoid of direct-support fire when he moves off the roads." It is problems such as these which have kept planners busy in determining the needs of our FMF air-ground team.



cannon frequently fell into our hands with a few rounds of ammunition and was used to good effect. This miniature, toy-like, field piece with its steel go-cart wheels was often lugged forward and up into the hills where its projectile, fired point blank into the base of a banyan tree, a cave, or prepared emplacement, caused many a prayer of thanks from the dirty, dog-tired youngsters pinned down and confronted with the one alternative of frontally assaulting a position that had already been ineffectively dusted by indirect artillery and mortar fire. The 57mm recoilless rifle appeared at the end of the war, on Okinawa I believe, and all concerned with the worm's eye view of the infantryman's problems breathed a sigh of relief. At long bloody last we had a weapon that could be where the rifle squad needed it and could put one in the side pocket with the expenditure of a minimum amount of ammunition and maneuver time. True, it was an odd sort of piece. It blasted to the rear with the sound of a gunnery sergeant looking at a rusty rifle in the hands of a Boot. Some people said that its flash, noise and dust disturbance would reveal its position and it would draw fire. So what? In the vast, booming, banging, flashing, panorama of the battle area, a little recoilless rifle that can fire a few rounds and then move a bit is going to receive a low priority in the list of OPs, truck columns, tanks, senior officers on the sky line inspiring their troops and other things the enemy can choose to shoot at. Besides we have adopted so many recoilless weapons of heavier caliber in the past few years that the original fears growing out of the 57mm recoilless rifle's back blast are not valid. It was a good weapon and we needed it badly. Then what happened? Somehow the 57mm recoilless rifle was placed in the family of antitank weapons and there it had to stand for judgment. "That thing couldn't penetrate a custard pie at a thousand yards," growled the 6-inch armor plate boys." So, the Marine infantryman up in the hills lost his pocket artillery piece and the antitankers down in the valleys got the 75mm and 105(106)mm recoilless rifles. In theory of course, the 75mm recoilless rifle is available for use against infantry targets — at least so say those who climb mountains and wade through swamps by the means of a grease pencil on a map. Anyone who has watched a group of poor souls sweat a 75mm recoilless rifle up a 60-degree slope in baking heat and icy weather realizes that the flame is hardly worth the candle. It seems there is also too much automatic reliance upon the overly burdened, vulnerable flame thrower operator and bazookaman for paving the way to cave entrances and firing ports of emplacements. These individuals with their bulky, cumbersome pipes, hoses and tanks always present the picture of 2 weary, war-ridden individuals who were detailed to transport and set up a stove in a quonset hut, but were somehow misdirected to the field of battle. We now have plenty of AT weapons — tanks, Energa grenades, 3.5-inch rocket launchers, mines, ONTOS, etc, to the extent that a tank no longer dominates the ground commanded by its weapons. It is to a considerable degree, a clumsy, wallowing, sitting duck, living on borrowed time when it gets close to resolute infantry forces. So let's give the infantryman back his pocket artillery piece even at the expense of the 75mm recoilless rifle so he will have a decent chance to do his job in the forests, hills and swamps where the enemy causes him to spend most of his time fighting, and let us make it readily available to him on the platoon level. Perhaps we can put this weapon in the 60mm mortar section of the rifle company to be left in a rear echelon and brought forward as necessary for the defense. In the meantime the 60mm personnel could play a tattoo on the enemy with the 57s during the attack. USMC

the observation post

SOLUTION—SSB

CAMP PENDLETON, CALIF. — This is to call attention to some of the problems encountered in radio communications and to show certain trends in equipment and systems designed to overcome these problems.

That something should be done was recently discussed in the GAZETTE most ably by Capt Fredericks in *The Company and the Atom* (Sept '56) in part as follows:

"Perhaps the biggest trouble maker of all is communications, and we are not now speaking of difficulties between battalion and companies, but communication failures within the company itself." Here the Captain is clearly and rightfully perturbed about his relatively short range radio communications for he goes on further to state that patrolling becomes a case of anxious waiting since "the AN/PRC-6 becomes a piece of useless equipment."

Would the Captain momentarily settle on a radio set 8 times better from a communication standpoint than the "erratic 6" and which would have no more bulk or weight? At the present time it just is not available since the major builders of SSB equipment have mostly catered to the available market which currently is the amateur.

Previous high-level thinking has not helped in this regard either as can be seen from the following quoted extracts from a technical paper only a year old.

"One of the main problems in using the single sideband for ground-to-air transmission is the complexity of the receiving equipment involved. In order to receive such signals a highly involved single sideband receiver must be used which is difficult to operate and requires extensive equipment."

Similarly, it has been found necessary to re-evaluate thinking in regard to transmission paths in the Aurora belts of the Arctic and Antarctic regions. For many years it has been believed that only very low frequency CW transmissions could provide radio communications where the path was through an auroral zone.

During the past summer the US Air Force in conjunction with Collins Radio Company planned and executed two flights which in themselves provide a wealth of substantiating data to show that SSB is definitely superior to AM and in certain cases CW.

Shown below are the routes that were taken by these flights using an Air Force C-97 from the Strategic Air Command. The Air Force considered these flights of sufficient magnitude and importance that MajGen "Butch" Griswold, Deputy SAC Commander was assigned as officer in charge.

The SSB equipment installed was a commercially available amateur system consisting of the Model 75A-4 receiver and a KWS-1 transmitter. The antenna was a fixed wire about 27 feet long. Also aboard the plane were representatives from the Air Development Center, the Chief Signal Officer of SAC Communication/Electronics, and Mr. Grosvenor, Associate Editor of *National Geographic Magazine*.

All told, the C-97 made over 2,200 contacts with amateurs in 26 countries during the 25,000-mile flights. Essentially all of these contacts were on SSB using voice control on the 14 megacycle amateur band of frequencies.

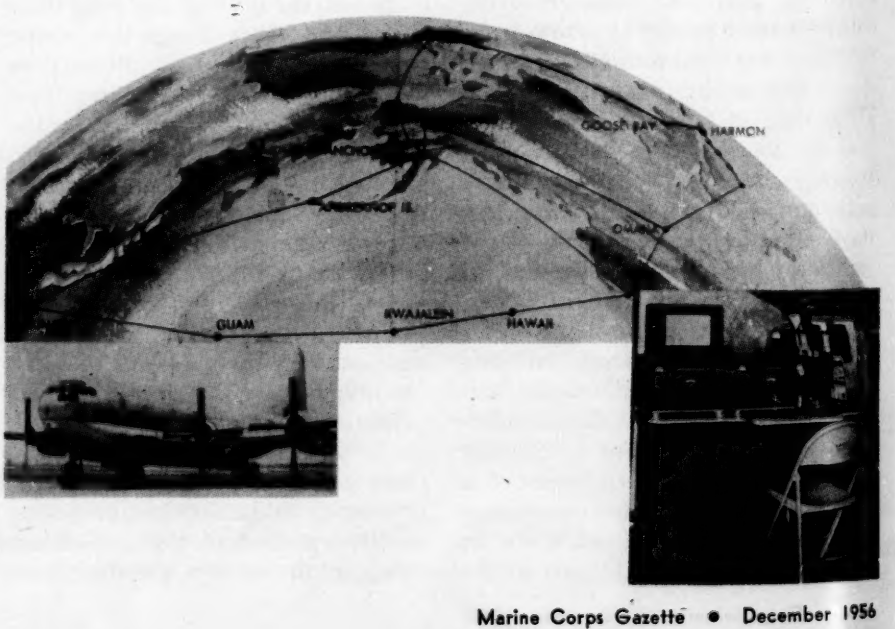
During this period the Arctic was in the midst of summer with 24 hours of daylight while the Antarctic was in winter with 24 hours of darkness. On the flight leg between Thule and Point Barrow the plane flew approximately midway between the geographic North Pole and the magnetic South Pole. Direct interpolar communications were established while the C-97 was on the ground at Thule between the Navy's Operation Deepfreeze stations both at Little America and Ross Island. These contacts were the first in history using SSB radio telephone between the two polar continents.

Also shown below is the SSB equipment used aboard the C-97 and installed in the passenger compartment. This installation weighs approximately 200 lbs. and the transmitter is rated at 1 kilowatt. This is, of course, a far cry from a replacement for the AN/PRC-6 mentioned earlier, but the principles underlying SSB communications are all present in this Air Force/amateur installation. Furthermore, Capt Fredericks does not need 1000 watts in his SSB replacement transmitter for his *Company and the Atom*.

Col J. G. Smith

ANEMOMETRY YET!

RIDERWOOD, MD. — For the young Marine just learning to shoot on the rifle range, there are many unknowns. Two of the most confusing of all the unknowns are: the effect of the wind and the individual shooter's holding and aiming peculiarities. And the worst part about these two problems, is that the best answers are provided only by experience, which is just what the new shooter does not have. Lacking that, however, he can still be taught how to handle these problems much more quickly and easily than he is at present on the rifle ranges as they are now equipped. This can be done with the use of anemometers, which are instruments telling the wind force and direction.



It is most important to remember the difference between the "Zero" windage correction, which is simply a correction to compensate for a given shooter's personal characteristics, and just plain "Windage" correction, which allows for the actual effect of the wind. Having found his "Zero" setting, the shooter can then correct for the actual wind effect. But how does the shooter find his "Zero" settings which are based on a "No Wind" condition, if an unknown wind is blowing when he walks on the range to start firing?

We can turn a regular USMC score book for the Cal. 30 M1 Rifle as a good point of departure to see what would happen if the wind were always a *known* factor as shown on the anemometer. One reason for finding the shooter's "Zero of Rifle" as defined on page 9 of the score book, is that once this "Zero" is found, windage settings can be applied to it directly by the "One-Click Windage Rule," as stated on page 8 of the score book.

With accurate wind information, the shooter can "Zero" his rifle for windage even though by definition, "Zero" is predicated upon a condition of "No Wind." In other words the horizontal component effect of a definitely known wind can be accurately enough calculated so that it can be allowed for, and the net result is "Zeroing" the rifle for windage as if there were "No Wind." Therefore, once a shooter has his settings where he hits the most bulls in a given wind, he can easily figure his windage setting for any other wind, by first figuring his setting for "Windage Zero" and then simply applying the proper correction by the One-Click Windage Rule.

Rather than attempt to recommend a procedure which would suffice for using the anemometer under all conditions, it is better to give a short summary of the data here and let the experienced range instructors work out their own methods of teaching with the new instrument. Basically then, reduced to over-simplified terms for clarity:

1) We want to find the shooter's "Zero of Rifle" so he can subsequently apply proper windage correction using the One-Click Windage Rule.

2) The "Windage Zero" of his rifle is the difference between the "theoretically" correct windage setting and the "actually" correct windage setting found when the shots are hitting the bull.

3) The anemometer giving the true wind velocity and direction thus enables "Zero of Rifle" to be found with the wind blowing and gives the shooter accurate information to set on his sights for subsequent firing.

Maj B. P. Weisheit

★ ★

New

THE 1 MILITARY INVESTMENT MANUAL

Free to all members of the Armed Forces . . .

The Military Investment Manual has been prepared by the Armed Forces Department of Harris, Upham & Co. as an exclusive investment service for military personnel. In this free booklet, servicemen and women will learn how they may have additional income *now* or upon *retirement* through sound investment programs.

For more than 60 years, Harris, Upham & Co. has served investors throughout the nation. To learn how their experience and judgment have been tailored to meet the specific needs of service people worldwide, simply fill out and send the attached coupon for your free copy of The Military Investment Manual.

HARRIS, UPHAM & CO. BUSINESS EST. 1895

ARMED FORCES DEPARTMENT, HARRIS, UPHAM & CO.
1505 H Street, N.W., Washington, D.C., Att: General John E. Dahlquist, USA Ret.

Gentlemen: Please forward promptly a free copy of "The Military Investment Manual." MG

*Name*_____ *Rank*_____

*Post or A.P.O.*_____ *City*_____ *Zone*_____ *State*_____

The Uniform Shop

MARINE CORPS EXCHANGE

OPERATED BY
Jos. A. Wilner & Co.
Custom Tailors since 1897

Now your choice of a Wilner uniform individually tailored to your exact measurements . . . or a complete selection in stock of ready-to-wear sizes. Fully approved regulation fabrics—tailored with the "know how" gained in serving Marine officers for three generations. Terms gladly extended. Mail orders promptly filled. Visit us or write for prices.

THE UNIFORM SHOP • ***MARINE CORPS EXCHANGE***
Operated By JOS. A. WILNER & CO. **Marine Corps Schools, Quantico, Va.**

passing in review

BOOKS OF INTEREST TO OUR READERS

Front Page Story . . .

THIS HIGH NAME — Public Relations and the United States Marine Corps — Robert Lindsay. Univ. of Wisc. Press, Madison, Wisc. 101 pages, index, illus. $1.75

This work, written by a Marine Reserve officer in connection with his graduate work, is a valuable contribution to Marine Corps history. It has certain other values, as will be indicated below, and considering the circumstances under which the research was done, it is a most complete and remarkably inclusive book.

The author traces from the beginning that strange, amorphous thing which has been called, successively, Publicity, Public Relations, Public Information, the Madison Avenue Boys, *and* a number of other things which have no real bearing on this review. The outstanding weakness of the book — its only weakness, as far as this reviewer is concerned — is that nowhere within it does the author appear to be firm in his own mind about what he means when he says "Public Relations."

This is quite understandable, however, since if he ventured in that direction he would find himself forced to indulge in a good bit of speculation, a practice which is frowned upon in the author of a graduate school paper.

However, this verges on quibbling, for *This High Name* is a well organized factual account of what we might call the growth of a realization within the Marine Corps that it pays to get along well with the public. One takes pride in learning from the author that our outfit never thought it necessary to bow and scrape and bootlick in order to curry favor—we have used the straightforward approach, and it has paid off.

We should be grateful to the author for giving us a certain amount of detail about the great struggle of the late 1940s which has been called the Merger Fight, and in particular for another tale which has a direct bearing upon that struggle. This is the best and fullest account this reviewer has come across of how then Congressman Melvin Maas and one Fiorello La Guardia laid down the law to President Hoover.

Any one who tries, in the future, to investigate any aspect of Marine Corps Public Relations will have to use this volume as a basic text and a guide to sources. The Marine Corps itself can profit by a thorough study of the book. The book deserves it, and this reviewer's recommendation is that it be given wide circulation, and that it be taken seriously.

A Study to be Remembered . . .

GALLIPOLI— Alan Moorehead. 372 pages, index, and bibliography. Illustrated. Harper Bros., NY $4.50

Every now and then a book is published which bids fair to become the last word on a given subject. *Gallipoli,* by the author of *Rum Jungle,* may quite well be such a book. I belive that it will take its place as the outstanding secondary source work on that monstrous campaign. It is certainly the finest and most balanced work yet to appear.

Mr. Moorehead tells the whole tale, and from all points of view, with detachment and with uncommonly fine discernment. He gives a clean, sharp picture of the political situation in Turkey, for example, at the time of the outbreak of war, and in doing so, he indicates how it was possible for the Allies to underestimate the Turkish capacity for resistance. His short, vivid descriptions of the personalities on each side are presented in such fashion that the decisions which they made are understandable as they never were before.

For example, when he has done with his incisive, dispassionate, and utterly merciless sketch of Sir Ian Hamilton, the reader is prepared to accept, without surprise, all of the incredible ineptness of this ill-chosen of all commanders. Also, we can understand the steadiness of von Sanders and the strange, furious genius for leadership of Kemal, which was to show itself plainly toward the end of the campaign, and even more when, long afterward, he lifted his country from utter defeat.

As for the running account of the operation itself, it probably could not be done better. For in addition to giving us a meticulous picture of all the material and personal factors, at all levels from the highest in London to the lowest in the Anzac beachhead, he points out quite clearly that there is something else involved here. It is the injection of this indefinable factor which makes the book a masterpiece rather than a merely first rate historical narrative.

And the factor really is indefinable. I don't know whether Mr. Moorehead is a mystic. It is a fact that in several places in his work he can quite well lay claim to having sensed the existence of something which we generally believe to be perceptible only to mystics.

Two examples will show what I mean. The first of these deals with the incredibly muddled days of planning for the operation, when no one knew, certainly, what he could have for carrying out his mission. There was a strange air of "now you see it, now you don't" about the whole matter of supply, manpower and shipping which gave promise to scuttle the operation even before it began. But, says Moorehead:

"There now began to grow up around [Hamilton] an atmosphere that made it all the more imperative for him to go on. The expedition began to develop a life of its own."

Exactly. Most of us have realized, at one time or another, that such a curious and inexplicable process was going on. It may have been in combat or it may have been in some great joint undertaking of a planning nature—at some point there began to be unmistakeable signs that a momentum had been acquired which was greater than the sum of all the individual efforts which had been poured into it.

The second example is less clearcut, but perhaps looks deeper into the nature of the phenomenon. In speaking of the events of the first day (when one might almost say the whole outcome was decided) he says:

"[For the Allied commanders] the great crises of the day appear to have gone cascading by as though they were some natural phenomenon, having a monstrous life of its own, and for the time being entirely out of control."

Throughout the entire account there is this sense that the operation was fated to begin with, and, being fated, could not have been changed. It's a curious

point of view, but almost an inevitable one, as Moorehead presents it.

Looked at from a different angle, the campaign emerges as perhaps the outstanding exhibit in the pathology of military science. It is a complete catalogue of horrible examples. From the vacillating at the highest governmental levels down as far as incredible ineptness of Hamilton and his immediate subordinates, the reader gets nothing but a sense of embarrassment that things could be done so by military men.

Only two aspects of the operation can be studied with a feeling of admiration —the courage and the stamina of the men who did the fighting, British, French, Anzacs—yes, and the Turks themselves. This, and the brilliance of the planning for an execution of the two evacuations.

Unhesitatingly recommended as the first step in a detailed study of the operation, this volume should be required reading for every student of military history.

Reviewed by LtCol J. L. Zimmerman

ED.: *The reviewer is presently with the Advanced Base Problem Section, MCEC and he is revising the 2-day presentation of this campaign at MCS. LtCol Zimmerman is also attempting to obtain some original Turkish material on the subject.*

A Span of History . . .

MEN IN ARMS—R. A. Preston, S. F. Wise and H. O. Werner; 340 pages, illustrated; Frederick A. Praeger Inc. NY. $6.50

During the last 16 years virtually every American has been affected by military activities. The impact of military activities. The impact of military requirements will continue to influence the peoples and the economy of this country for some years to come. Thus, when a book appears whose theme is to present the interrelationship of military affairs with political, social, economic and technologic activities of nations, note should be taken of such publication.

Men in Arms covers the span of Western history from the beginning of Greek civilization, 1000 BC, to the present. It provides in simple terms a background of the influence of warfare on society.

A work of this scope must of necessity be somewhat general, and this book perhaps suffers from the deficiency of being too superficial. In encompassing the span of almost 3,000 years of Western history, the authors must select and decide to include only those events which have had a decisive influence on society. Such selection is a matter of individual opinion, and different writers might well have chosen to place the emphasis on events other than those included or excluded from *Men in Arms*.

The first 2,850 years of the historic period under consideration is treated in only half of the book. Thus the emphasis is largely placed on the 150 years from the emergence of Napoleon to the present day. This unusual distribution of effort leads to a discussion of what are generally current events, rather well known by the majority of adult readers, instead of a balanced view of the whole period under consideration.

While the history of warfare is often treated primarily at the ground army level, *Men in Arms* gives to sea power its proper and important place in the field of military affairs. The Persian war was decided by the victory of the Greek fleet at Salamis in 480 BC. The Romans, less sure of the sea than of the land, wrested control of the Mediterranean from the Carthaginians by the use of ships carrying soldiers and hence employed the first Marines. The long survival of Byzantium was due to the correct emphasis placed on sea power. In more recent times the *Pax Britannica* was enforced by the Royal Navy. And within the span of the past few years it was the application of naval power which brought defeat to Japan. Air power born in World War I and matured in World War II is discussed in the final chapters. Attention is given to the effectiveness of close air support for ground forces, the value of carrier task forces and the impact of strategic bombardment on society in general.

The authors are qualified by experience and occupation for the task they undertook. Richard A. Preston, formerly of the RAF, is professor of history at Canada's Royal Military College. Sidney F. Wise served in the RCAF and is now at Queen's University. Herman O. Werner, a commander in the US Naval Reserve, teaches at the US Naval Academy.

Men in Arms is of interest to the general reader because it provides a background for the better understanding and evaluation of current events. For the military reader numerous points of departure are provided for further reading. In this connection the Introduction to *Men in Arms* and the first chapter, "Warfare and Society," are of particular merit as summaries of the theme which the book develops. The bibliography appended should provide valuable assistance to the reader interested in enlarging upon the points covered in the book and which have stimulated his curiosity.

Reviewed by LtCol V. J. Croizat

ED: *This reviewer, presently in G3, HQMC, is an avid student of military history.*

For every rank and every service the only complete guide to service life and traditions for the wives of our armed forces
The Complete Guide for the
Serviceman's Wife
Elizabeth Land and Lieutenant Colonel Carroll V. Glines, Jr. U.S.A.F.
$5.00 hardbound
$2.75 paperbound
H.M.Co.

YOU CAN *RELY* ON
EVALUATED ARMS

The Champions Do!

Winchester Rifles & Shotguns
Smith & Wesson Revolvers
High Standard Target Pistols
Dinan-Colt Match Pistols
Sturm-Ruger Target Pistols
Western Supermatch Ammunition
and
Selected Accessories

EVALUATORS LTD.
QUANTICO, VA.

Showroom:
#1 Woodland Dr.,
Triangle, Va.

George O. Van Orden
Brig. Gen., USMC, Ret'd.
President

Kaman Aircraft and Lycoming scored a turborotor first when this Kaman HOK helicopter took to the air powered by Lycoming's XT-53, the first U. S. free-shaft gas turbine designed specifically as a helicopter power plant.

Kaman Aircraft pioneered turbine powered helicopters in 1951 with the world's first turborotor helicopter, scored again in 1953 with the world's first twin-turbine powered helicopter. Kaman leads the field in turborotor experience and development and is proud of the forward steps it is taking in the interest of our National Defense.

KAMAN

THE KAMAN AIRCRAFT CORP., BLOOMFIELD, CONN.

Established 1918

A. M. Bolognese & Sons

TAILOR AND HABERDASHER, QUANTICO, VIRGINIA

FULL DRESS UNIFORMS AND CIVILIAN EVENING CLOTHES A SPECIALTY. LET US MOUNT YOUR MEDALS AND FILL YOUR INSIGNIA AND ORNAMENT NEEDS. EXPERT ORTHOPEDIC SHOE REPAIR USING O'SULLIVAN #1 SOLES AND HEELS ONLY.

Summer Service Gabardines for Spring delivery:
Blouse $55
Pants $25

Winter Service Uniforms for immediate delivery:
Jacket & Pants $88
Coat & Pants $95
Topcoat $85

Shirts: Dacron & Cotton $8.50 Dacron & Wool $16.50

	Campaign Hats (Add $2 for trans.)	Engraved Swagger Stick	Swords & Accessories
Officer	$11.50	$12.95	$85.00
Enlisted	8.50	7.95	55.00

Engraved Calling Cards with Plate: Officers $12 Wives $8

CUSTOMER ORDER BLANK

PLEASE PRINT — FILL ALL BLANKS

Name .....

Address .....

.....

Articles Desired .....

Special Fitting Problems .....

Height ..... Pants Inseam ..... Seat ..... Cap .....

Weight ..... Neck ..... Sleeve ..... Glove .....

Waist ..... Chest ..... (outseam) Shoe .....

NEW BOOKS

The books listed below have been received recently by the GAZETTE *for review. More detailed reviews of many of these books will appear in subsequent issues. These books may be purchased at the* GAZETTE BOOKSHOP *now. Association members who are interested in reviewing books should notify the Editor and Publisher.*

A PICTURE HISTORY OF RUSSIA—*Edited by John Stuart Martin. Crown, NY* $5.95

This is a comprehensive account of the Russian people from earliest times to the present. Contains some 1,200 illustrations. An earlier edition appeared in 1945. This is the revised 1956 edition.

THE CIVIL WAR—*Grossett & Dunlap, Inc., NY. Two volumes, boxed.* $10.00

Volume I, *The American Iliad* is by Otto Eisenschiml and Ralph Newman, and contains an introduction by Bruce Catton. It is based on contemporary accounts. Volume II, *The Picture Chronicle of the Events, Leaders and Battlefields of the War,* is by Ralph Newman and E. B. Long, with an introduction by Allan Nevins.

ABOARD AND ABROAD—*Harvey S. Olson. Lippincott, Philadelphia.* $4.95

This is the 1957 edition of Olson's complete travel guide to Europe. Its 672 pages contain virtually every bit of detailed information the traveller would need, whether on his first trip to Europe or his thirty-first. It is entertaining reading even if you're not going to Europe.

THE WAR POTENTIAL OF NATIONS—*Klaus Knorr. Princeton University Press, Princeton, NJ.* $5.00

This is an analysis of the various elements which constitute the latent military strength of nations. The author takes up economic capacity, "the will to fight" and administrative efficiency, and shows how they may be evaluated in the contemporary setting.

PORK CHOP HILL—*S. L. A. Marshall, William Morrow & Co., NY.* $5.00

The battle began 6 April 1953 and lasted 48 hours. The author interviewed the patrols before they went out, and talked to the survivors when they came back. The first two-thirds of this book about fighting in Korea belong entirely to Pork Chop Hill. A final section is devoted to the action of night patrols. Included is "Into the Alligator's Jaws," which appeared in the October 1956 GAZETTE.

MARINE CORPS GAZETTE INDEX 1956

TITLE — AUTHOR AND MONTH

Arms and Armament

Another Use for the 3.5 — Dunn, Sept
The Bayonet — Rankin, April
A Comparison: Marine and Russian Weapons — Haslam, Oct
Guided Missiles — La Plant, April
Hail to the BARman — Davis, March
An Idea on Cannister — Driver, July
The Marine Corps Has a Mortar — Hill, March
The Monster — Cass, Jan
More Punch for the 60mm — Driver, April
New Developments — Ordnance — Haslam, March
Remember the 75s — Vick, April
What Happened to the 57? — Haffner, Dec

Aviation

Agility in Flight — Martz, July
Air-mobile Medical Support — Wilson, Dec
All-weather Air Defense — Hunt, June
Aviation Boot Camp — Maloney, March
Aviation Safety and Combat Readiness — Fox, Dec
Choppers and Grasshoppers — Petry, Feb
Have Missiles Killed the Fighter? — Keller, Sept
The Helicopter Family — Clapp, Aug
The History and Development of Close Air Support — Sullivan, Nov
Low and Slow — Perry, Aug
Marine Aviation, Its Origins and Growth — Boggs, May
Nose Dive! — Bailey, Jan
Paint 'em Green! — Walsh, Dec
Realistic Readiness — Folsom, May
The Whirling Divergence — Martz, Oct

Electronics and Communications

Communications Curse Cured — Chapman, Feb
The Death of Able Baker — From Both Sides of the Pond — Murray, July
Meet Mr. Engineer — Smith, April
The Evolution of Amphibious Communications — Reber, Nov

Foreign Military

The Arab Revolt — Pavey, July
A Battle Report: Alam Halfa — Hart, Roberts, Bayerlein, Sept
The Campaign in the Crimea, 1941-42 — von Manstein, May
Evolution of Japanese Landing Operations — Morton, April
How Hitler Missed in the Middle East — Hart, Nov
Operation Citadel — von Manstein , Aug
Russian Helicopter Development — Dec
Why Hitler Invaded Russia — and Failed — Hart, Dec
Why Russian Seapower — Hittle, Nov

Geopolitics, Strategy

Amphibious Doctrines of Alfred Thayer Mahan — Russel, Feb
Austria — Gellner, Feb
Background on Formosa — Johnson, March
Czechoslovakia 1956 — Gellner, Dec
The Middle East Powder Keg — Seim, July
National Peace Objectives and War Aims, 1775-1955 — Kittridge, July
Musings on the A Bomb — Amme, Oct
A Reorientation — Cushman, Feb
Sea Power in World History — Sokol, Dec
SEATO — Morton, Oct
Time for a Change — Murray, Nov
Time, Space and Will: the Politico-Military Views of Mao Tse-Tung — Katzenbach, Oct

Intelligence

Aerial Photography for Ground Forces — Strandberg, May
Reconnaissance — Key to the Concept — Hudson, Aug

TITLE — AUTHOR AND MONTH

Leadership, Esprit, Morale, Tradition, Discipline

Base Plate McGurk — Feb
By Character and Skill — Bressoud, April
Discipline Has No MOS — Stubbs, Jan
Don't Expect — Inspect — Wilson, Feb
Energy in Leadership — Crumb, May
Gilding the Pill — Hargreave, June
Jack 'em Up — Averill, Jan
Let's Delegate — Green, Feb
Non-Judicial Punishments — Stubbs, Sept
The Old and the New — Crumb, Nov
The Old Corps — Prickett, July
Sell Your Own Stock — Donahoe, Dec
So You're a CO — Aldridge, Feb
Special Trust and Confidence — Heinl, Nov
A Touch of Tradition — Magruder, Feb, July, Nov
The Uniform: the Why and the Wherefore — Hargreave, Nov
Union Discipline and Leadership in the Civil War — Catton, Jan

Marksmanship

Berdan's Sharpshooters — Strandberg, Aug
Camp Perry — Clean Sweep — Nov
Haslam Rebutted — Witkowski, Feb
Realistic Requalification Course — White, Aug
Shoot to Hit — Sanders, May

Miscellaneous

The Association Sword — Jan
Don't Miss It — Cooper, Sept
From the Former Publisher — Cox, June
Perspectives on Public Relations — Lindsay, Jan
The Unit Staff Officer — Donovan, Nov

Personnel and Administration

Change of Station — Graham, June
Fitness Report — Cushman, Aug
A Look at the Hump — Platt, July
SRB Marks — Staff NCOs — Galbraith, Jan
Your Son Can Be an Officer — Wilkerson, March

Physical Fitness

No Place for Weaklings — Carey, April
Physical Fitness — Drakely, Sept

Supply and Logistics

MWSG — Yeaman, April
Nuclear Power and Military Transport — Vance, Oct
Reorganization of the Service Regiment — Warren, March
Ship to Shore — Burton, June
Supply and Demand — Snyder, Jan

Tactics and Techniques

The Company and the Atom — Fredericks, Sept
End Item — Collier, June
Fighting Formation — Keller, May
Final Objective — Averill, Aug
Guerrilla Warfare — Hanrahan, March
Have Tactics Been Invaded by the Atom? — Strawson, Aug
Into the Alligator's Jaws — Marshall, Oct
The Infantry-Tank Team — Norton, Jan
Let There Be Light — Dupras, March
Majon-Ni: Perimeter of Expediency — Montross, Nov
Mobile Defense for Marines — Wheeler, June
NGF-FO — Fredericks, Feb
NGF in the Solomons, I, II, III — Henderson, March, June, Dec
A Realistic Approach to Better LMG Utilization — Sheehan, Sept

Title	Author and Month
A Rebuttal to Liddell Hart	Roberts, Jan
Target Acquisition	Woessner, March
Stop Those Guns at Night	Reilly, Aug
War by Battalions	Bowser, Oct

Training

Title	Author and Month
Battle Drill	Wisely, Oct
Infantry — March Again!	Gross, Feb
Is Close Order Drill Necessary in the Atomic Age?	Williams, Feb
Give Them Professional Knowledge	Paradis, June
More Effective Training	Williams, July
An NCO School in Every Company	Finne, Oct
The New Drill	Phillips, June
Night Training for Marines	Simpson, Dec
On Land, Sea and Air	Oct
Prepare for Instruction	La Plant, June
Prepare for Promotion	Erbland, May
Proficiency from Training	Schultz, Aug
Senior School — the New Look	Nickerson, Sept
T & T Regiment	Dec
The Umpire JIC	Wilkes, Feb
Reserve Training	Singer, Sept

PASSING IN REVIEW, BOOK REVIEWS

Title	Author and Month
The Age of the Fighting Sail	Forester, Oct
Aircraft Today	Taylor, June
Air Power	Lee, April
The American Presidency	Rossiter, Nov
The American Wars	Meredith, Aug
The Answer Book on Naval Social Customs	Hickey, Wier, Aug
The Armenian Community	Aatamian, March
The Art of the Aqualung: How to Swim and Explore Underwater	Gruss, Sept
Bedouin Command: The Arab Legion, 1953-1956	Young, Nov
The Big Lie	White, July
Brainwashing: the Story of Men Who Defied It	Hunter, Sept
Boon Island	Roberts, Feb
Bugles and a Tiger	Masters, Feb
The Call to Honor	deGaulle, March
Canada's Army in Korea: a Short Official History	General Staff, Army Hq, Sept
Civil War on Western Waters	Pratt, Oct
Cradle of Conquerors: Siberia	Lessner, Jan
Democracy in World Politics	Pearson, Jan
Eisenhower's Six Great Decisions	Smith, Sept
Electrons, Waves and Messages	Pierce, Aug
The Fatal Decisions	Freidin, Richardson, July
Field and Stream Treasury	Grey, McCluskey
The Forgotten Leaders of the Revolution	Swiggett, Jan
Fragbogen	von Salomon, April
Gallipoli	Moorehead, Dec
General Leemy's Circus	Snyder, March
The Gentleman and the Tiger	McClellan, Aug
Gideon Goes to War	Mosley, Aug
Guidance	Locke, Jan
Guided Missiles in War and Peace	Parson, April
History of the Cold War	Ingram, May
HMS Olysses	MacLean, March
Mr. Hamish Gleave	Llewellyn, Sept
Infantry Attacks	Rommel, Feb
Infantry Operations and Weapons Usage in Korea (Winter of 1950-51)	Marshall, June
Jet Engine Manual	Peace, Mangham, Jan
Jubilee	Brick, May
Judo Katas	Yerkow, Jan
The Key to Combat Intelligence	Townsend, March
Kill or Get Killed	Applegate, June
Knight Errant, A Biography of Douglas Fairbanks, Jr.	Connell, Jan
Lincoln and the Tools of War	Bruce, Aug
Memoirs of Harry S. Truman, Year of Decision	Truman, May
Memoirs of Harry S. Truman, Years of Trial and Hope	Truman, June
Men at War	Hemingway, Feb
Men, Rockets and Space Rats	Mallan, Jan
Men in Arms	Preston, et al, Dec
Military Heritage of America	Dupuy, Nov
The Mind of Napoleon	Herold, April
The Net that Covers the World	Cookridge, Jan
Nine Rivers from Jordan	Johnston, Feb
Okinawa: Victory in the Pacific	Nichols, Shaw, April
Panzer Battles	von Mellenthin, July
Paratrooper	Bradley, Aug
The Presidency Today	Corwin, Koenig, Nov
The Report on Unidentified Flying Objects	Ruppelt, April
The Revolt of Gunner Asch	Kirst, April
Soldier	Ridgway, July
Soviet Imperialism	Tokaev, Sept
The Soviet Secret Services	Heilbrunn, Nov
The Transportation Corps: Movements, Training and Supply	Wardlow, Nov
This High Name	Lindsay, Dec
20 July	FitzGibbons, May
Two Rubles to Times Square	Richards, May
USA in Color	Holiday, Oct
US Marine Operations in Korea, Vol. II, The Inchon-Seoul Operation	Montross, Canzona, Nov

OBSERVATION POST

Title	Author and Month
Aleutian Notes	Schulze, April
Anemometry Yet	Weisheit, Dec
Antarctica Gets a Face Lifting	Ogelsby, Nov
Atomic Armor	McLoughlin, Nov
Best Dressed Service	Ward, June
Boot Recruiters	Crook, Aug
Bring It Back Alive	Stewart, Sept
A Can-Do Program	Kutz, July
A Cap Trap	Franklin, July
Career Incentives and Hard Work	Ritter, Nov
Dead Reckoning	Curry, May
Don't Do It, Dunn!	Edwards, Nov
Drill to Perfection	Saxton, Nov
Duplicate Duplicates	Crook, May
The Evaluation	Brewer, Cappeletto, July
Fitness Reports	Booth, Pond, Schimmenti, Oct
Guest Night	Hudgins, Aug
The Hart of the Matter	Bowser, Hart, Lembeck, April
Highly Irregular	Gose, June
It's Easy to Say But —	Hunt, Aug
Light AAA — In or Out	Valente, Nov
The New Corps	Haffner, Nov
Night-in-Mess	Benge, May
Offset Azimuth	Brown, Nov
The Pike's Peak	Morton, June
Post Scripts to Prickett's Old Corps	Power, Aug
Post Tags	Wilkes, Aug
Potpourri on Requalification	Southall, Aug
Professional Criticism	Folsom, Sept
Provisional Platoons	Cizek, May
Recon Rebutts	Swanda, Nov
Re-disc Haslam	Haslam, May
Re-enlistment	Roberts, Aug
Remote Impossibilities	Wickman, May
Sea-going Marines as Recon Troops	Bradley, Sept
Select Information	Skocpol, July
Small Bore	Witkowski, June
Solution — SSB	Smith, Dec
TAO and the Mar Div	Averill, Oct
Time to Spare? Go by Government Air	Stower, Aug
Untapped Pool	Mueller, Sept

Books on Parade

For Your Bookshelf

MILITARY

1 INFANTRY ATTACKS, *Rommel* .... $3.50 (no discount)
2 PANZER BATTLES, *von Mellenthin* $5.00
3 FATAL DECISIONS, *Freidin & Richardson* $4.00
4 RUSSIA LEAVES THE WAR, *Kennan* $7.50
5 THE WORLD'S WARSHIPS, *Blackman* $3.50
6 US MILITARY DOCTRINE, *Smith* .. $3.50
7 US MARINES & AMPHIBIOUS WAR, *Isely & Crowl* $7.50
8 THE POWER OF PERSONALITY IN WAR, *Freytag-Loringhoven* $3.00
9 ON WAR, *Clausewitz* $5.00
10 THE ANSWER BOOK ON NAVAL SOCIAL CUSTOMS, *Wier & Hickey* $2.50
11 ATOMIC WEAPONS & ARMIES, *Miksche* $5.00
12 STRATEGY, *Hart* $5.95
13 ASSAULT BATTLE DRILL, *J. C. Fry* $2.50
14 THE RIVER AND THE GAUNTLET, *Marshall* $5.00
15 KESSELRING — A SOLDIER'S RECORD, *Kesselring* $5.00
16 MEN AGAINST FIRE, *Marshall* $2.75
17 CAVALRY OF THE SKY, *Montross* $3.00
18 PANZER LEADER, *Guderian* $9.50
19 A MILITARY HISTORY OF THE WESTERN WORLD, *Fuller*, Vols. I, II & III, each $6.00
20 ATOMIC WEAPONS IN LAND COMBAT, *Reinhardt and Kintner* $3.95
21 INFANTRY UNIT LEADERS GUIDE, *Multop & Barrett* $1.75

HISTORICAL

22 IRREGULARS, PARTISANS AND GUERRILLAS, *Blacker* $5.00
23 CORAL AND BRASS, *Smith* $3.00
24 FAMOUS AMERICAN MARINES, *Lewis* $3.75
25 PORTRAIT OF PATTON, *Semmes* .. $6.00
26 THE CRUCIAL DECADE, *Goldman* $4.00
27 INCHON-SEOUL OPERATION, *Montross & Canzona* $2.50
28 THE PUSAN PERIMETER, *Montross & Canzona* $2.00
29 SOLDIER, *Ridgway* $5.00
30 DEFEAT AT SEA, *Bekker* $3.95
31 FROM LEXINGTON TO LIBERTY, *Lancaster* $5.75
32 BATTLE FOR TARAWA, *Stockman* .. $1.75
33 BOUGAINVILLE AND THE NORTHERN SOLOMONS, *Rentz* .. $2.25
34 CAMPAIGN ON NEW BRITAIN, *Hough & Crown* $4.25
35 GUADALCANAL CAMPAIGN, *Zimmerman* $4.75
36 IWO JIMA: AMPHIBIOUS EPIC, *Bartley* $4.75
37 OKINAWA: VICTORY IN THE PACIFIC, *Nichols & Shaw* $5.50
39 YEAR OF DECISIONS, VOL. I *Truman* $5.00
40 YEARS OF TRIAL AND HOPE, Vol. II, *Truman* $5.00
41 FIX BAYONETS, *Thomason* $4.00

CIVIL WAR

42 THE WEB OF VICTORY, *Miers* $5.00
43 BANNERS AT SHENANDOAH, *Catton* $2.50
44 A STILLNESS AT APPOMATTOX, *Catton* $5.00
45 THEY CALLED HIM STONEWALL, *Davis* $5.00
46 R. E. LEE, 4 vols., *Freeman* $27.00
47 BATTLES AND LEADERS OF THE CIVIL WAR, *Bradford* $8.95
48 BEAURFGARD, *Williams* $4.75

GAZETTE BOOKSHOP POLICIES

DISCOUNT — Marine Corps Association members *only* are entitled to a 10 percent discount on bookshop purchases. A valid membership card must be presented.

CREDIT — Association members only are accorded the convenience of purchasing merchandise on credit.

MAILING —The Association will bear the costs of packaging and mailing members' purchases. The normal member's discount may not be granted on purchases which are mailed to foreign addresses. Non-members will be charged for the postage expense on shipments to foreign addresses.

CHECKS—Please make personal checks in the exact amount of the purchase payable to the Marine Corps Association.

49 THEY MET AT GETTYSBURG, *Stackpole* $4.95
50 THIS HALLOWED GROUND, *Catton* $5.95

MISCELLANEOUS

51 SMALL ARMS OF THE WORLD, *Smith* $10.00
52 GUIDEBOOK FOR MARINES $1.50
53 THE MARINE CORPS WIFE, *Jerome & Shea* $3.50
54 KILL OR GET KILLED, *Applegate* $3.00
55 GUN DIGEST (1956), *Amber* $2.50

MILITARY JUSTICE

56 NAVAL SUPPLEMENT TO MANUALS FOR COURTS-MARTIAL $1.50
57 MANUAL FOR COURTS-MARTIAL, US, 1951 .... $3.50
58 MILITARY JUSTICE UNDER THE UNIFORM CODE, *Snedeker* $17.50
59 SOVIET MILITARY LAW AND ADMINISTRATION, *Berman & Kerner* $4.00
60 TRIAL COUNSEL AND DEFENSE COUNSEL, *Dep't of the Army* .... $.40

HUMOR

61 NO TIME FOR SERGEANTS, *Hyman* $2.95
62 HERE AND NOW, *Block* $2.95

FICTION

63 THE SIXTH OF JUNE, *Shapiro* $3.95
64 BATTLE CRY, *Uris* $3.95
65 THE MAGNIFICENT BASTARDS, *Crockett* $3.50

BEST SELLERS

66 A CERTAIN SMILE, *Sagan* $2.95
67 THE MANDARINS, *Beauvoir* $6.00
68 ANDERSONVILLE, *Kantor* $5.00
69 DON'T GO NEAR THE WATER, *Brinkley* $3.95
70 PEYTON PLACE, *Metalious* $3.95
71 A SINGLE PEBBLE, *Hersey* $3.00
72 AUNTIE MAME, *Dennis* $3.50
73 PROFILES IN COURAGE, *Kennedy* $3.50
74 EISENHOWER: THE INSIDE STORY, *Donovan* $4.95
75 GALLIPOLI, *Moorehead* $4.50

THE GAZETTE BOOKSHOP • BOX 1844 • QUANTICO, VA.

BOOK ORDER FORM

List Price of Books Ordered .... $.....
Less 10%* *(Members Only)* .... $.....
☐ Payment Enclosed ☐ Bill Me Amount $.....

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
16	17	18	19	20	21	22	23	24	25	26	27	28	29	30
31	32	33	34	35	36	37	38	39	40	41	42	43	44	45
46	47	48	49	50	51	52	53	54	55	56	57	58	59	60
61	62	63	64	65	66	67	68	69	70	71	72	73	74	75

SEND TO: (Please print)

NAME & RANK (PRINT)

ADDRESS

December

*No discount on shipments to foreign addresses. Prices subject to change without notice.

Season's Greetings
The Marine Corps Association